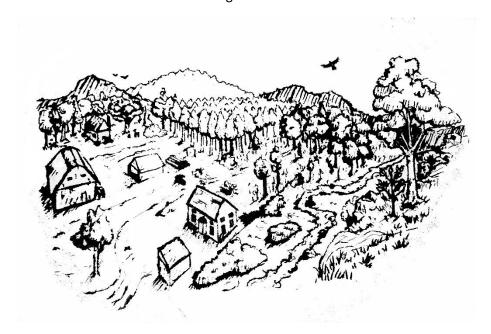
The Efficacy of Wildlife Conservation Assistance Programs for Vermont Family Forest Owners Final Project Report

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Executive Summary

- We conducted a study between 2018 and 2020 to assess the efficacy of wildlife conservation assistance programs for family forest owners (FFOs) in Vermont with 10 or more acres of woodland.
- To quantify patterns across the state, we sent a mail survey to 2,122 Vermont FFOs. The overall cooperation rate for the survey was 38%.
- The three most important reasons for woodland ownership among respondents were to enjoy beauty or scenery, to protect or improve wildlife habitat, and to protect nature or biodiversity.
- Sixty-nine percent of respondents have had an expert visit their woodland, but only 32% of respondents knew of an expert in their area who would visit their land free of charge.
- Forty-five percent of respondents had spoken to a woodland expert about improving wildlife habitat on their land.
- Ninety-seven percent of respondents have conducted at least one activity specifically to help wildlife on their woodland since they have owned it.
- The conservation activity that respondents were most familiar with was enrolling in Vermont's Current Use Program (UVA; 86% of respondents were familiar), while applying for a cost-share program was the activity they were least familiar with (31% were familiar).
- The greatest barrier against three conservation actions (making a patch cut, putting a
 conservation easement on all/part of your woodland, and applying for a cost-share
 program) was an overall lack of familiarity with each topic. For these three actions, the
 number of people who had no or very low familiarity with each topic was greater than
 the number of people who agreed with any of the provided statements regarding topicspecific barriers.
- The barrier against enrolling in Vermont' Current Use Program with the highest level of agreement was "I do not want anybody telling me what to do on my land" (40% of all respondents agreeing).
- The barrier against arranging for a woodland expert visit with the highest level of agreement was "I do not need expert advice to keep my woodland healthy" (21% of all respondents agreeing).
- The three most trustworthy sources for woodland information among respondents were county foresters (rated very or extremely trustworthy by 81% of respondents), consulting foresters (rated very or extremely trustworthy by 77%), and University of Vermont Extension Services (rated very or extremely trustworthy by 76%).
- Receiving a brochure, magazine, or other written material was the only information dissemination method that over half of respondents (71%) would prefer. The method that the fewest people preferred (only 29%) was to attend an online workshop/class.
- The top three topics that respondents were interested in learning about were the control of unwanted insects/tree disease (77% of respondents were interested),

- wildlife/wildlife habitat (71% were interested), and invasive plants (70% were interested).
- To improve the efficacy of technical assistance programs (e.g. visits from a woodland expert), it would be helpful if Vermont family forest owners received more information and reassurance that expert advice can be helpful for themselves, the wildlife living in their woodland, or the overall health of their woodland. Family forest owners may also benefit from reminders or more information about the existence of free expert visits. Our results suggest that providing materials in a written format that owners can review on their own may help build rapport and lead to further actions.
- Although additional analyses are still being conducted, it is important to recognize that the needs of owners will differ depending on what "stage" of the decision cycle they are in. In the earlier stages, they will need more general information, such as what their options are and the related pros and cons through relatively simple, straightforward materials from trustworthy sources. In the latter stages, they will need information that is more technical in nature, including specific recommendations on professionals to use, again from sources that they trust.
- To improve the efficacy of cost-share programs, woodland owners may benefit from more information about the existence of these programs. Enrollment in cost-share programs might increase if landowners felt reassured that the types of management actions covered by these programs are helpful and appropriate for the wildlife on their woodland, or the overall health of their woodland. After those two barriers are addressed, reducing the complexity of the application process may be the best way to encourage more people to utilize cost-share programs.

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Introduction

There are an estimated 4.5 million acres of forestland in Vermont and 60% of these acres are owned by families, individuals, trusts, and estates, collectively referred to as family forest owners (Butler et al. 2020, Figure 1). The fate of the forests lies largely in the hands of these 139,000 ownerships (Butler et al. 2016). However, most family forest owners are not "engaged," at least in terms of how most conservation experts quantify engagement (Davis and Fly 2010). According to results from the 2018 National Woodland Owner Survey, only 41% of family forest owners in Vermont with 10 or more acres have a written forest management plan, 31% have received advice within the past 5 years, and 4% have participated in cost-share programs (Butler et al. 2020). Compared with national statistics, Vermont family forest owners have relatively high levels of engagement; across the US only 11% of family forest owners with 10+ acres have a written management plan, 18% have received advice, and 4% have participated in a cost share program (Butler et al. 2020).

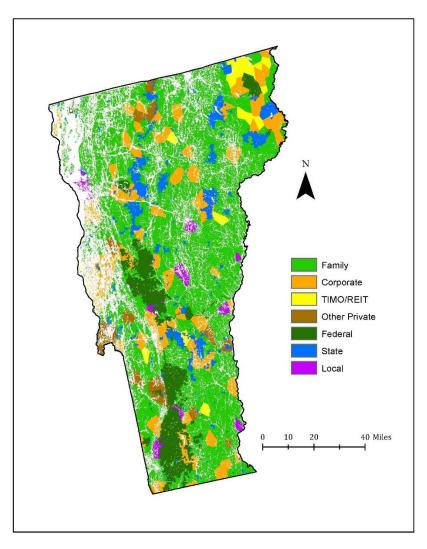


Figure 1. Land owned by family forest owners (lime green) in Vermont (Sass et al. 2020)

While family forest owners in Vermont have relatively high levels of engagement, the majority of landowners in the state are still "unengaged" (i.e. they have not participated in a traditional forest management activity like receiving advice from a professional forester, writing a management plan, or enrolling in an assistance program). Many forest conservation programs have been implemented in Vermont to increase engagement and improve forest stewardship, but these programs are run by different groups with varying missions and levels of outreach. Organizations interacting with forest owners in Vermont include federal agencies, such as the USDA Natural Resources Conservation Service, state agencies, such as the Vermont Department of Fish and Wildlife, and non-governmental organizations (NGOs), such as the American Forest Foundation. Many of these groups run their own conservation programs, and some work in partnership to connect landowners with programs that fit their needs. Examples of these programs include:

- The Environmental Quality Incentives Program (a federal cost-share assistance program, also known as EQIP)
- Vermont's Use Value Appraisal Program (a Vermont state preferential property tax, also known as the Current Use Program)
- The Woods, Wildlife and Warblers program (a non-governmental group which provides personalized advice to landowners by sending an expert to visit their woodland, as well as a cost-share program)
- Forest stewardship education (lectures, trainings, peer-to-peer mentoring, written material, or other educational services provided by federal, state, or local governments as well as NGOs)

Some of the aforementioned program types may be categorized as "assistance programs", "technical assistance programs" or "incentives programs," but there is no clear consensus on the definitions of these terms (Kilgore et al. 2015). For the purpose of this study, we will use "forest conservation programs" as a broad term to refer to all program types listed above (cost-share, preferential property tax, personalized advice/expert visits, and forest stewardship education), while "assistance programs" will refer specifically to cost-share programs and personalized advice/expert visit programs.

This project assessed the efficacy of wildlife conservation assistance programs available to Vermont family forest owners in 2018. Specifically, our study focused on the efforts coordinated by the Woods, Wildlife and Warblers partnership (WWW) and the Vermont Fish and Wildlife Department. In 2018, WWW (a partnership between the American Forest Foundation, the Vermont Woodlands Association, and Audubon Vermont; www.woodsandwildlife.org) was evaluating the impacts of alternatives to the traditional cost-share mechanism, hypothesizing that lower cost-share payments implemented through a non-governmental group with fewer bureaucratic hurdles would have higher conservation impacts. Our role in WWW's study was to follow up with family forest owners who had and had not participated in either cost-share program to determine their motivations and barriers for/against the programs. Our assessment of WWW's efforts was largely based on qualitative interviews with family forest owners and will be described in a forthcoming report.

The efforts of the Vermont Fish and Wildlife Department, in partnership with Vermont Coverts, focused on assessing the efficacy of assistance programs for family forest owners

across the state. Our role was to develop, implement, and analyze a mail survey aimed at quantitatively measuring the efficacy of these programs. This report describes and analyzes the results from the mail survey. In the survey, we focused on programs that provided technical and/or financial support for wildlife habitat management, as well as closely-connected practices such as those that promote healthy and resilient forests and those that help conserve land for future generations. We included the Use Value Appraisal (UVA) program, Vermont's preferential property tax program, in this assessment for its role in increasing landowner engagement in forest conservation practices (Butler et al. 2014). Our research collected information on family forest owners' familiarity with assistance programs, the role of wildlife in landowners' conservation decisions, preferred information delivery methods, and the overall effectiveness of the assistance.

Goals and Objectives

The objectives of this report were to:

- 1) Determine the relevance and productivity of Vermont's assistance programs, with a focus on those that help improve wildlife habitat, for increasing forest conservation practices.
- 2) Determine the role of wildlife as a motivation for landowners to enroll in assistance programs and conduct forest management activities.
- 3) Provide suggestions for improving the efficacy of wildlife-focused landowner assistance programs in Vermont.

Methods

This study used a mixed-methods approach, which has been utilized in other high-quality studies of family forest owners and integrates qualitative interviews with a quantitative survey (Van Fleet et al. 2012, Fischer and Charnley 2012). In-person interviews were used to develop a deeper understanding of the motivations associated with landowner participation (or lack thereof) in programs and the impacts of this participation on their behaviors and, ultimately, their forests. Using preliminary findings from the interviews, the mail survey allowed for the quantification of patterns across the state and for analyses related to landowners' past and future participation in programs. All interview and survey materials were approved by the University of Massachusetts Amherst Internal Review Board (Protocol ID: 2017-4379).

The mail survey targeted a random sample of 2,122 family forest ownerships across the state. All family forest owners in the sample owned at least ten acres of woodland within one property in Vermont. This sample size was determined through the combination of a power analysis and cooperation rate projections. Using the Dillman et al. (2014) method for conducting a power analysis, we determined that contacting at least 2000 FFOs would provide results with a 95% confidence level and a +/- 3% margin of error. These levels allow for robust estimates, and are considered standard by other high quality surveys (Leiserowitz et al. 2018, Dillman et al. 2014, Teel et al. 2005). To select a random sample of Vermont FFOs, we used a probability-based sampling design where the probability of selecting a parcel was proportional

to the size of the parcel (Dickinson and Butler 2013). We used the 2017 Vermont Grand List (administered by the Vermont Department of Taxes) as our sample frame, which provided the necessary information on parcel size.

We developed the topics and format of the survey questions in consultation with our partners based on preliminary patterns observed during the interviews and from prior research on family forest owners. The core set of questions focused on the landowner's knowledge, level of engagement, motivations, and barriers towards conducting five specific conservation-related actions on their land. The actions analyzed were: 1) enrolling in Vermont's Current Use Program, 2) arranging for a woodland expert to visit the landowner's property, 3) making a patch cut, 4) putting a conservation easement on their woodland, and 5) participating in a cost share program. Additional sets of questions were based off of the U.S. Forest Service's National Woodland Owner Survey (Butler et al. 2020) and Wildlife Value Orientation surveys (Fulton et al. 1996, Teel and Manfredo 2010, Chase 2016). The total length of the survey was set so that it did not exceed 25 minutes, on average, to complete. To help ensure the questions were reliably interpreted by Vermont family forest owners, we pre-tested the instrument by conducting cognitive interviews.

Surveys were sent in multiple rounds via the mail, following the Dillman et al. (2014) Tailored Design Method. This method involves four waves of mailing. First, a pre-notice postcard was sent to alert potential respondents that a questionnaire would be arriving soon. Next, the owners received a questionnaire with a cover letter that described the purpose and importance of the survey as well as a pre-paid, pre-addressed return envelope. A reminder/thank you postcard was then mailed to thank those who responded and to encourage non-respondents to respond. Finally, a second questionnaire and cover letter with a pre-paid return envelope was sent to landowners who had not yet responded. All mailings occurred between January 27th, 2020 and March 17th, 2020. For more information regarding survey methods and implementation, see Appendix 1.

For those landowners who did not respond to the mail inquiries, a shortened version of the survey was conducted by telephone to assess for nonresponse bias. Our nonresponse assessment showed that five variables (representing acres of woodland owned, whether trees had been cut for sale, whether an expert had visited, whether a cost share program had been completed, and age) showed no significant difference between respondents and non-respondent (p=0.05). For one variable (gender), non-respondents were significantly more likely to identify as female than respondents. However, the gender demographics represented in our survey closely matched those found in another recent study of family forest owners in Vermont (Butler et al. 2020), and we believe the use of a telephone-based contact method may have overrepresented women in the nonresponse sample.

Results

Between February 2nd, 2020 and June 4th, 2020, 867 ownerships responded to our survey request. Of these 867 responses, 712 people completed surveys that were usable for analysis. Surveys were excluded from analysis if the respondent indicated that they owned less than 10 acres of woodland in Vermont, if they did not meet the definition of a family forest owner, or if

they completed less than 75% of the questions applicable to them. Our overall cooperation rate was 38%, calculated as:

of usable surveys/(# sent - # undeliverable)

The following paragraphs describe the results of each question in the survey, organized into sections to correspond with their presentation in the instrument.

General Questions about Your Ownership

The survey began with a set of instructions which asked respondents to answer each question based on the property they owned in Vermont. If the respondent owned more than one property, they were asked to answer all questions based on their largest property in Vermont. To increase the accuracy of responses about the size of the participant's woodland, we asked participants first to list the acreage of their largest property, and then the number of woodled acres on that property. All subsequent analysis for each respondent was based on their acreage of woodland.

The highest percentage of respondents owned woodlands between 100 and 499 acres in size (41%), followed closely by woodlands between 25 and 99 acres in size (39%) (Figure 2). The mean size of a woodland was 193 acres, while the median was much lower at 91 acres. One reason our mean was so much higher than our median was due to the responses of two individuals who reported owning 10,000 acres of woodland each.

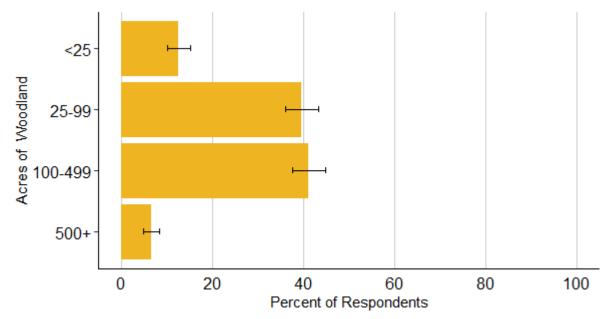


Figure 2. Percetange of respondents by the size of the woodland on their largest property. 1

The amount of time a FFO has owned their woodland can affect their attitudes, behaviors, and future intentions (Butler 2017). The years in which each respondent acquired

9

¹ The error bars on every graph indicate a 95% confidence interval.

their land ranged from 1932 to 2019. The median year of acquirement was 1995. The respondent's tenure on the land was calculated as:

2020 - Year of Acquirement

The largest percentage of respondents (24%) acquired their land between 20 and 29 years ago (Figure 3).

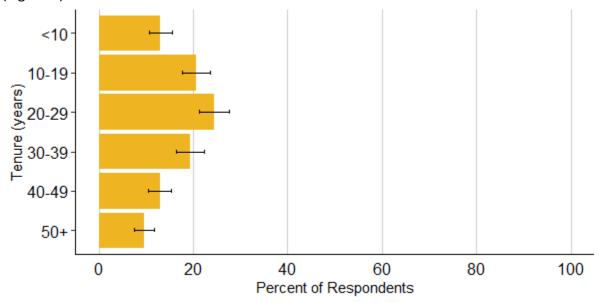


Figure 3. The percent of respondents by land tenure.

Often, FFOs who live on or near their woodland, compared to those who do not, have different levels of engagement in forest conservation practices (Golden et al. 2012, Feldpausch and Higginbotham 2006). Likewise, those who own woodland as part of a farm are likely to have different property characteristics and reasons for owning their woodland than those without a farm (Huff et al. 2019). The majority of survey respondents lived on or within one mile of their woodland (66 %) and their woodland was not part of a farm (63%) (Figure 4).

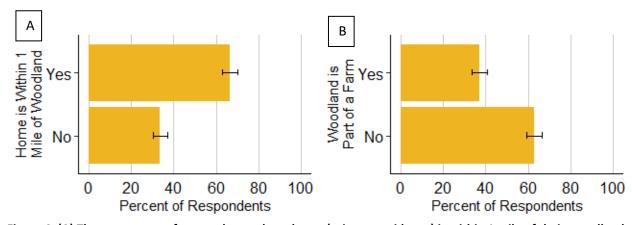


Figure 4. (A) The percentage of respondents whose home (primary residence) is within 1 mile of their woodland. (B) The percentage of respondents whose woodland is part of a farm.

There are a variety of reasons why Vermont family forest owners own their wooded land (Butler et al. 2020). To understand which reasons were most important, we provided a list of potential reasons and asked respondents to list the level of importance each reason was for them on a 5-point Likert scale ("Not important" to "Very important"). To calculate which reasons were most important, we combined the responses "very important" and "important" and compared them against respondents who stated that a reason was "not important, "of little importance", or "moderately important". We found that the top three "important" or "very important" reasons for ownership were to enjoy beauty or scenery (87%), to protect or improve wildlife habitat (84%), and to protect nature or biological diversity (79%) (Figure 5).

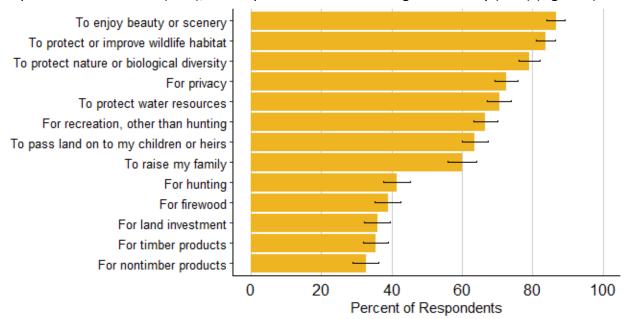


Figure 5. The percentage of respondents who stated that the above reasons for owning their woodland were important or very important.

Wildlife value orientations are general patterns of beliefs that provide meaning and direction to fundamental values in the context of wildlife (Fulton et al. 1996). Family forest owners can be categorized as mutualists, traditionalists, pluralists, or distanced individuals, and these identities are associated with their attitudes and behaviors regarding wildlife management (Teel and Manfredo 2010). According to Teel and Manfredo (2010), mutualists support the idea that wildlife are deserving of rights and care; they believe that humans and wildlife should live in harmony. Traditionalists hold an ideological view of human dominion over wildlife, which is associated with the prioritization of human well-being over wildlife and a more utilitarian treatment of wildlife. Pluralists hold a combination of both mutualist and traditionalist viewpoints, prioritizing values differently depending on the situation. Distanced individuals lack a well-formed wildlife value orientation, suggesting either a lack of connection with wildlife or a lack of interest in wildlife issues. Using the responses to the 14 statements comprising the Wildlife Value Orientation Scale used by Chase (2016), we calculated the wildlife value orientation for each respondent using a heuristic method. The pluralist orientation was the most common amongst respondents (34%), although mutualists (32%) and traditionalists

(26%) were also well represented (Figure 6). An important finding from this wildlife values inquiry was the low proportion of distanced individuals (only 8% of respondents), indicating that most Vermont family forest owners have well-formed opinions about wildlife even though wildlife are valued for multiple, and occasionally opposing, reasons.

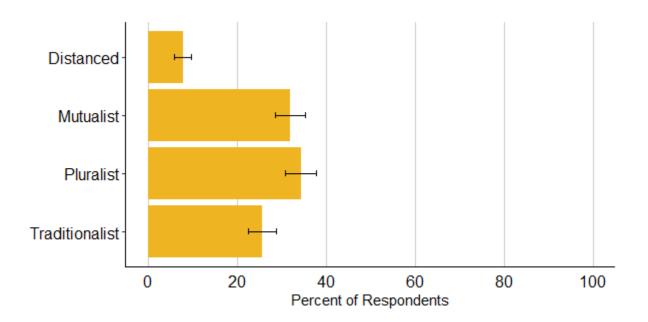


Figure 6. The percentage of respondents who identified as distanced, mutualists, pluralists, and traditionalists after calculation of their wildlife value orientation score. Identities are calculated to be mutually exclusive; respondents could only identify as one of the four potential orientations.

History of Your Woodland

The history of past activities that a family forest owner has conducted on their land can be very useful for predicting their future behaviors (Kittredge 2004, Langer 2008). Ninety-four percent of respondents indicated that they have cut or removed trees from their woodland since they have owned it for at least one of the reasons we provided as answer choices. The largest percentage (83%) had cut/removed trees to improve forest health, followed by cutting/removing trees for personal use (76%) and cutting/removing trees to improve wildlife habitat (67%) (Figure 7).

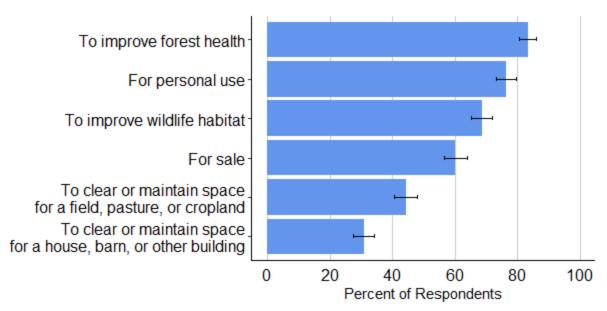


Figure 7. The percentage of respondents who have cut or removed trees from their woodland for each of the above reasons.

In addition, 97% percent of respondents indicated that they had conducted at least one activity on their woodland since they have owned it specifically to help wildlife. The largest percentage (84%) had left dead or dying trees to maintain or create habitat, followed by piling brush or branches to create habitat (66%) and planting apple trees/helping apple trees to grow in order to provide food for wildlife (57%) (Figure 8). One limitation of this survey question was that it did not ask respondents about the magnitude of each action they have completed. For example, we do not know if a respondent who indicated that they have piled brush has completed this activity only once since they have owned their woodland, or if they have piled brush multiple times over multiple years. However, the finding that 97% of all respondents have completed at least one activity to promote forest health and wildlife habitat indicate strong wildlife stewardship values amongst respondents.

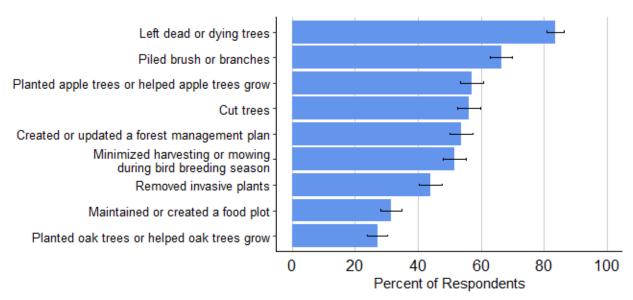


Figure 8. The percentage of respondents who have conducted each of the above activities for the purpose of helping wildlife.

Current Use Program

The core of the survey asked participants about five different forest conservation actions. For each action, participants answered questions about their familiarity with the topic, their personal experience or thoughts about taking this action for their woodland, and their level of agreement with barriers and motivations related to that action. The first of the five action-based questions on the survey addressed the topic of Vermont's Current Use Program. A definition of the Current Use Program, which included its synonymous titles ("Land Use Program" and "Use Value Appraisal/UVA"), was provided. The most common level of familiarity amongst respondents was "I am very familiar with the Current Use Program" (38% of respondents), followed by "I am extremely familiar with the Current Use Program" (30% of respondents) Overall, 86% of respondents can be considered familiar with Vermont's Current Use Program because they had selected either the somewhat, very, or extremely familiar answer choice options (Figure 9).

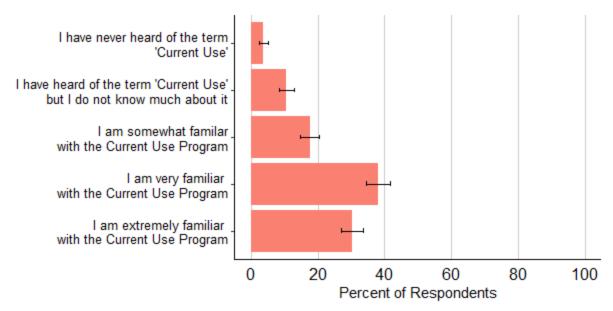


Figure 9. The level of familiarity survey respondents had with the Current Use Program by percentage. Respondents could select only one statement.

We considered any respondent who selected either "I have never heard of the term 'Current Use'" or "I have heard of the term 'Current Use' but I do not know much about it" to be unfamiliar with the topic. Unfamiliar respondents were instructed to skip the remainder of the Current Use question (parts b and c) and proceed to the next survey question. We chose to implement this skip pattern based on the assumption that questions about a landowner's level of engagement in an action (part b), as well as motivations and barriers for that action (part c) would be inapplicable to respondents who were unfamiliar with the topic in general. Fourteen percent of survey takers were instructed to skip to the next question. Of the 611 people who answered all parts of the question, the vast majority (80%) stated that their land was currently enrolled in the Current Use Program. The second largest category consisted of respondents who had "thought about enrolling their land, but decided not to enroll" (5% of respondents), which had only one more respondent than the third largest category of people, which represented those who had "thought about enrolling their land, but have not yet made a decision" (also 5% of respondents) (Figure 10). Based on the assumption that those unfamiliar with Current Use were not enrolled in the program, our results indicate that 69% of all survey respondents were enrolled in Current Use.

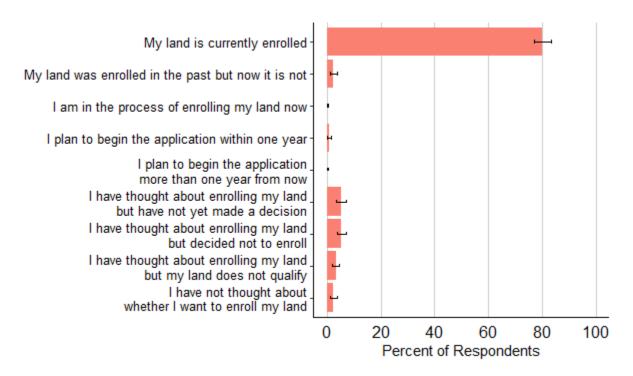


Figure 10. The percentage of respondents who selected the above statements as best describing their thoughts, or personal experience, about enrolling their woodland in Vermont's Current Use program. Only those who were somewhat, very, or extremely familiar with Vermont's Current Use program were instructed to answer this question. Respondents could select only one statement.

For the barrier and motivation statements, we combined the "slightly agree" and "strongly agree" response choices, so that each respondent could be classified as either agreeing with, or not agreeing with, each statement. Based on this method for assessing agreement versus non-agreement, "I want to reduce my taxes" was the most agreed-upon motivation for enrolling in Current Use (91% of respondents). However, over half of respondents agreed with every motivation listed in the response choices (Figure 11). These results indicate that there are multiple motivating factors for enrolling in Current Use that are all widely agreed upon by Vermont FFOs. The program may be seen by enrollees as more than just a tax break, but also as a method for keeping their woodland healthy. The fact that 52% of respondents familiar with Current Use agreed that "I (or my family) could not afford to keep my land without Current Use" testifies to the importance of the program to Vermont's FFOs.

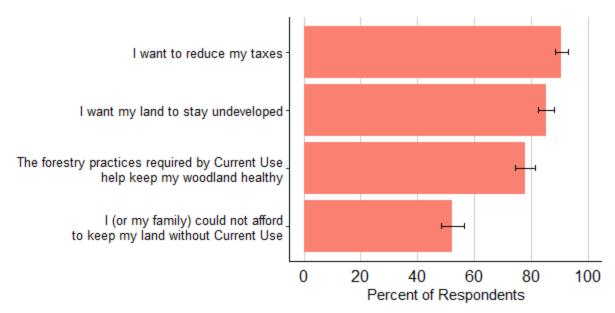


Figure 11. The percentage of respondents who slightly agreed or strongly agree with each of the above motivations for enrolling their woodland in the Current Use Program. Only those who were somewhat, very, or extremely familiar with Vermont's Current Use program were instructed to answer this question.

Conversely, no barrier to enrollment was agreed upon by over half of the respondents. The barrier with the highest degree of agreement was "I do not want anybody telling me what to do with my land" (47% of respondents), followed closely by "I want to have the option to develop my land in the future" (45% of respondents) (Figure 12). Both of these barriers represent concerns about loss of control over one's property, and it is very interesting to note that people agreed on these perceived negative aspects about the program much more so than they agreed about perceived issues regarding forest health, the effort required to enroll, or confusion about the program/the enrollment process.

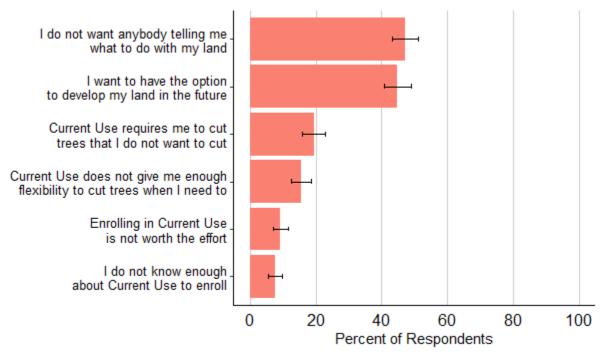


Figure 12. The percentage of respondents who slightly agreed or strongly agree with each of the above barriers against enrolling their woodland in the Current Use Program. Only those who were somewhat, very, or extremely familiar with Vermont's Current Use program were instructed to answer this question.

Expert Visits

The second of the five action-based questions on the survey addressed the topic of woodland expert visits. A definition of "woodland exert" was provided, which included foresters, biologists, and fellow landowners who represented either government agencies or non-governmental groups. Part (a) of the question provided a list of woodland experts and asked participants to indicate whether or not each type of type of expert had visited their land. We also provided a "do not know" option for each expert type, as results from the interviews indicated that landowners often cannot remember the name of the expert and/or the agency/group that expert represented. Of those who were sure whether each of the listed experts had visited or not, we found that 70% of respondents have had a consulting forester/private consultant visit their woodland, and 67% have had a Vermont county forester visit (Figure 13).

Out of all respondents (including those who responded "do not know" for each expert visit), 66% were sure that a consulting forester/private consultant has visited their woodland, while 60% were sure that a county forester has visited their land. Only 6% were unsure if a consulting forester/private consultant had visited, while 11% were unsure whether a county forester had visited. Respondents were most unsure about whether an NRCS employee had visited their land (24% unsure). These results highlight the finding that while FFOs may remember taking a conservation action, they often do not remember who/what group assisted them with that action. This can have important implications when an FFO wishes to follow-up with a question or make an additional conservation action, as they may not remember which agency or group to seek out for assistance.

We also focused directly on landowners' past visits with consulting foresters/private consultants and compared these with past visits from county foresters. We found that three hundred forty-two respondents (48% of total respondents) were sure that they have had both a consulting forester/private consultant and a county forester visit their land; whereas 82 respondents (12%) were sure that they have had a consulting forester/private consultant visit without ever having a county forester visit, and 66 people (9%) were sure that they have had only a county forester visit without ever having a visit from a consulting forester/private consultant. These results indicate that it is common for a Vermont family forest owner to have received advice from both types of foresters, but that a smaller segment of FFOs have received advice from only one of these expert types. This difference is likely associated with the free, but limited, services of county foresters acting as a conduit for additional interactions with professionals. There may also be some issues, as highlighted below, with low awareness of this free service being available and relative trust from different sources.

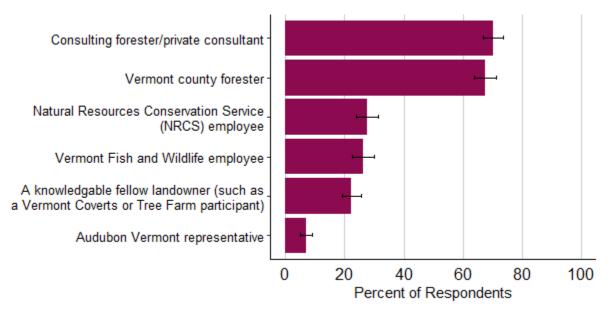


Figure 13. The percentage of respondents who have had the above woodland experts visit their land, excluding those who indicated that they did not know whether each of the above experts had visited.

Unlike the other four action-based questions, the expert visit question did not instruct respondents to skip any part of the question based on their level of familiarity with the topic. We did not believe that a skip pattern was warranted because the phrase "woodland expert" is not a forest conservation-specific vocabulary term. When asked which statement best described their thoughts, or personal experience, about arranging for an expert to visit their woodland, the majority of respondents selected "a woodland expert had visit their land" or selected "yes" to one of the expert types listed in the first part of the question (69%). The statement with the second-highest number of selections was "I have not thought about whether I want to arrange a visit with a woodland expert" (18%) (Figure 14). It was interesting to note the two most frequent responses were on opposite ends of the decision-making path;

the majority of respondents had either already taken action to consult with an expert on their woodland, or they had never even thought about it. These results indicate that the most effective way to increase the number of expert consultations would be to provide appropriate information to those landowners who have never considered having an expert visit their woodland; either because they do not know that such services are available to them or because they have never thought about whether they would like to have a woodland expert visit their land.

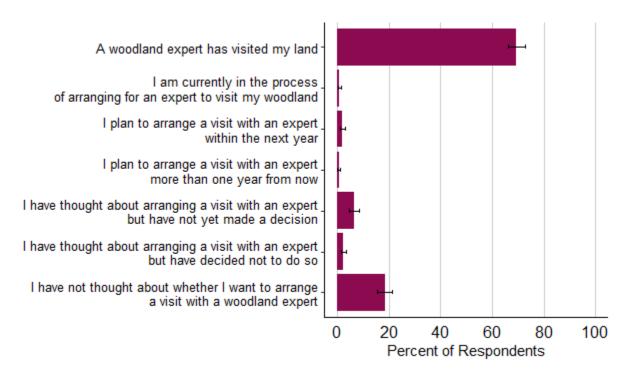


Figure 14.The percentage of respondents who selected the above statements as best describing their thoughts, or personal experience, about arranging for a woodland expert to visit their land. Respondents could select only one statement.

Following the methods for the Current Use analysis, we combined the "slightly agree" and "strongly agree" response choices to the barrier and motivation statements so that each respondent could be classified as either agreeing with (either slightly or strongly), or not agreeing with, each statement. Based on this method, we found that "a visit from an expert helps me learn something new about my land" was the most agreed-upon motivation for arranging a visit (84% of respondents) (Figure 15). However, all three motivation statements had high levels of agreement, ranging from 77% to 84%. This indicates that there are several reasons why FFOs are motivated to consult with an expert, all with high levels of agreement across FFOs.

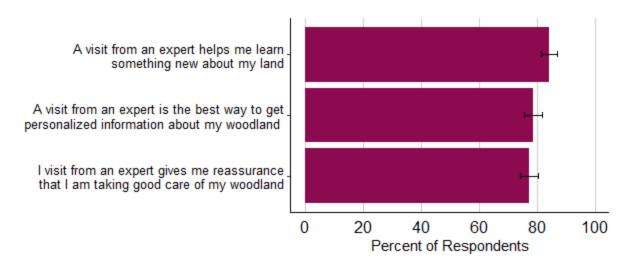


Figure 15. The percentage of respondents who slightly agreed or strongly agree with each of the above motivations for arranging a woodland expert to visit their woodland.

In contrast, no barrier statement had even 25% agreement amongst respondents. The statements with the highest percentage of agreement were "I do not need expert advice to keep my woodland healthy" (22%) followed very closely by "A visit from an expert is too costly" (also 22%) (Figure 16). This indicates that there are relatively few barriers that are salient to Vermont FFOs compared with the motivations to consult with an expert. However, concerns about the usefulness and costs of an expert visit should be addressed, and efforts should be made to help connect FFOs with the types of experts that can most help them.

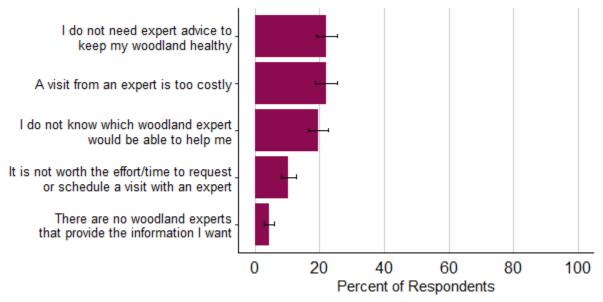


Figure 16. The percentage of respondents who slightly agreed or strongly agree with each of the above barriers to arranging for a woodland expert to visit their woodland.

Patch Cuts

The third of the five action-based questions on the survey addressed the topic of patch cuts. A definition of the term "patch cut" was provided. The most common response provided for familiarity with patch cuts was "I have never heard of the term patch cut" (26% of respondents), followed by "I am somewhat familiar with patch cuts" (23% of respondents) (Figure 16). Overall, only 57% of respondents could be considered familiar with patch cuts because they indicated that they were either somewhat, very, or extremely familiar with the term.

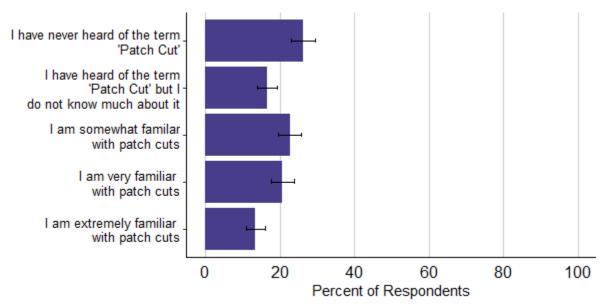


Figure 17. The level of familiarity survey respondents had with patch cuts by percentage. Respondents could select only one statement.

Respondents who were not familiar with the term "patch cut" were instructed to skip the remainder of the question (parts b and c) and proceed to the next question. As with the Current Use question, we chose to implement this skip pattern based on the assumption that questions about a landowner's level of engagement in an action (part b), as well as motivations and barriers for that action (part c) would be inapplicable to respondents who were unfamiliar with the topic in general. Due to overall low levels of familiarity with patch cuts, 43 percent of respondents were instructed to skip parts (b) and (c). Of the 406 people who completed parts (b) and (c), a slight majority (51%) stated that they had completed a patch cut on their woodland. The second largest category consisted of respondents who had "not thought about whether I want to make a patch cut on my woodland" (22% of respondents) (Figure 18). Assuming that those unfamiliar with patch cuts have not completed this type of cut on their woodland while they have owned it, our results indicate that 29% of all survey respondents have completed a patch cut.

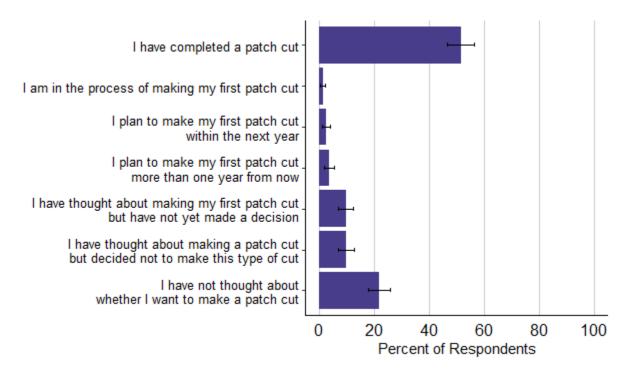


Figure 18. The percentage of respondents who selected the above statements as best describing their thoughts, or personal experience, about making a patch cut on their woodland. Only those who were somewhat, very, or extremely familiar with patch cuts were instructed to answer this question. Respondents could select only one statement.

Next, we combined the "slightly agree" and "strongly agree" response choices for statements relating to motivations and barriers for making a patch cut, as we had for the Current Use and expert visit questions. Based on this method, "making a patch cut improves the habitat for some animals" was the most agreed-upon motivation for making a patch cut (90% of respondents). Two other motivations, "making a patch cut helps establish young trees on my woodland", and "making a patch cut is good for the overall health of my woodland" had agreement levels at or above 75% (Figure 19). For sites where making a patch cut is a suitable forest management technique, our results indicate that messaging about the benefits of patch cuts for wildlife habitat may be the most helpful in increasing the number of people who complete this conservation action.



Figure 19. The percentage of respondents who slightly agreed or strongly agree with each of the above motivations for making a patch cut on their woodland. Only those who were somewhat, very, or extremely familiar with patch cuts were instructed to answer this question.

In contrast, no barrier statement had over 50% agreement amongst respondents. The statements with the highest percentage of agreement were "making a patch cut will encourage the growth of unwanted plants/trees" (33%) and "making a patch cut looks ugly" (30%) (Figure 20). Our results imply that for sites where making a patch cut is a desirable conservation action, addressing concerns about the growth of unwanted plants and poor aesthetics may be more important than concerns about loss of income, effort, or harm to wildlife.

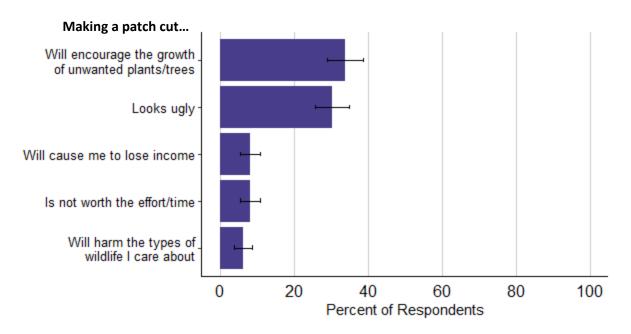


Figure 20. The percentage of respondents who slightly agreed or strongly agree with each of the above barriers against making a patch cut on their woodland. Only those who were somewhat, very, or extremely familiar with patch cuts were instructed to answer this question.

Conservation Easements

The forth of the five action-based questions on the survey addressed the topic of conservation easements. A definition of the term "conservation easement" was provided. We found that the most common level of familiarity about conservation easements was "I am somewhat familiar with conservation easements" (28% of respondents), followed by "I have heard of the term "conservation easement" but I do not know much about it" (24% of respondents) (Figure 21). Overall, 64% of respondents were familiar (either somewhat, slightly, or extremely) with conservation easements.

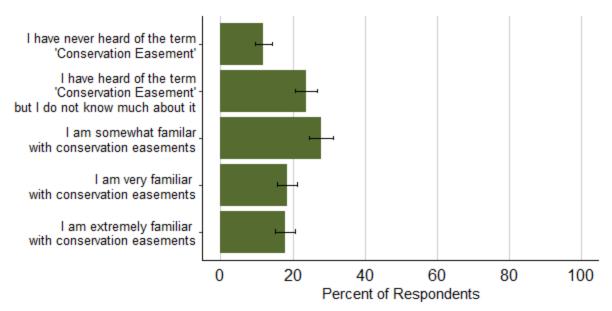


Figure 21. The level of familiarity survey respondents had with conservation easements by percentage. Respondents could select only one statement.

As in the previous action-based questions, respondents who were unfamiliar with conservation easements (i.e. they selected either "I have never heard of the term 'conservation easement" or "I have heard of the term 'conservation easement' but I do not know much about it") were instructed to skip the remainder of the question (parts b and c). Thirty-six percent of respondents were instructed to skip to the next question. Of the 458 people who were familiar with easements and answered all parts of the question, the two most frequently selected statements (each with 28% of respondents) were "I have thought about putting a conservation easement on my woodland, but decided not to do so" and "I have not thought about whether I want to put a conservation easement on my woodland" (Figure 22). Assuming that those unfamiliar with conservation easements do not have one on their woodland, our results indicate that 12% of all survey respondents have a conservation easement on all or part of their woodland.

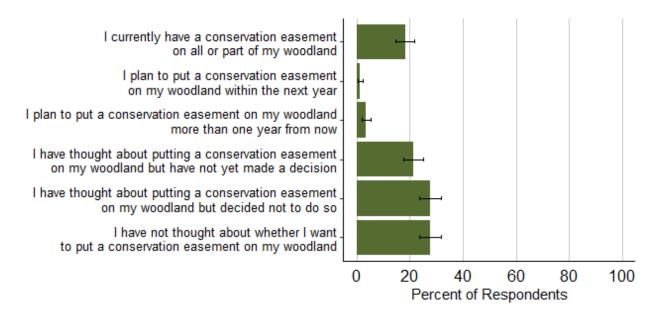


Figure 22. The percentage of respondents who selected the above statements as best describing their thoughts, or personal experience, about putting a conservation easement on all or part of their woodland. Only those who were somewhat, very, or extremely familiar with conservation easements were instructed to answer this question. Respondents could select only one statement.

As in the previous sections, we categorized respondents' answers to each barrier and motivation statement as agreement or non-agreement. "I want a conservation easement on my woodland as a legacy for future generations" was the most agreed-upon motivation for conservation easements (47% of respondents). Interestingly, no motivation had levels of agreement over 50%, meaning that the majority of respondents did not agree with any of the potentially motivating factors for getting a conservation easement. However, those who were motivated had similar levels of agreement for each motivation statement (Figure 23). These motivated landowners likely see conservation easements as benefiting multiple aspects of their woodland, which include protecting land as a legacy for future generation, helping wildlife, protecting the overall health of their land, and preserving the character of Vermont.

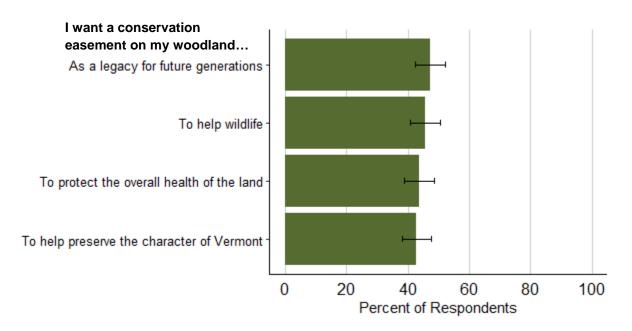


Figure 23.The percentage of respondents who slightly agreed or strongly agreed with each of the above motivations for putting a conservation easement on all or part of their woodland. Only those who were somewhat, very, or extremely familiar with conservation easements were instructed to answer this question.

In contrast, one barrier to conservation easements did receive over 50% levels of agreement. This barrier was "an easement would reduce the value of my property" (54% of respondents). Two other barriers received over 40% levels of agreements, which were "I want future generations to have the ability to develop my woodland (43% of respondents) and "I want to have the ability to develop my woodland" (also 43% of respondents) (Figure 24). These findings imply that there are relatively high barriers to getting a conservation easement, compared to the other actions analyzed in this study. Getting a conservation easement is inherently a trade-off between losing certain property rights and gaining permanent conservation benefits; therefore the top three barriers (e.g. "I want to have the ability to develop my woodland") are not easily addressed by conservation organizations. Rather, conservation organization may find that their time is better spent addressing barriers that were still frequently cited amongst respondents but are within the organization's power to control, such as building trust within the community and providing information to landowners about how to put an easement on their land.

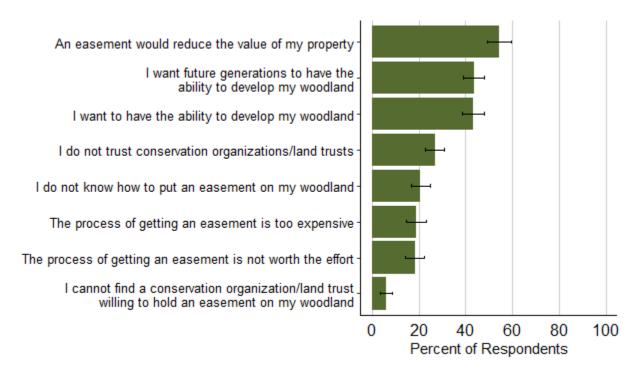


Figure 24. The percentage of respondents who slightly agreed or strongly agree with each of the above barriers against putting a conservation easement on all or part of their woodland. Only those who were somewhat, very, or extremely familiar with conservation easements were instructed to answer this question.

Cost Share Programs

The final action-based question on the survey addressed the topic of cost share programs. A definition of the term "cost share program" was provided. The most common level of familiarity about the topic of cost share programs was "I have never heard of the term "cost share program" (43% of respondents), followed by "I have heard of the term 'cost share program' but I do not know much about it" (26% of respondents) (Figure 25). Overall, only 31% of respondents could be considered familiar (either somewhat, very, or extremely) with this topic.

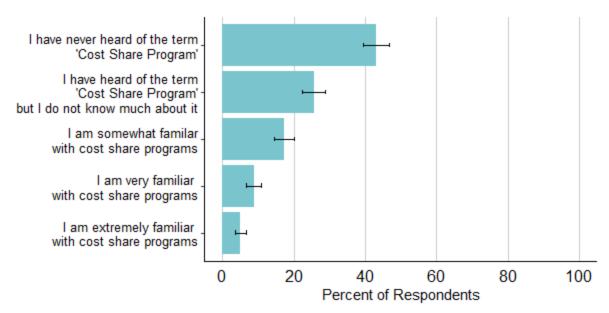


Figure 25.The level of familiarity survey respondents had with cost share programs by percentage. Respondents could select only one statement.

Sixty-nine percent of respondents were not familiar with cost share programs (i.e. selected either "I have never heard of the term 'cost share program" or "I have heard of the term 'cost share program' but I do not know much about it) and were instructed to skip to the next question. As with previous action-based questions, we chose to implement this skip pattern based on the assumption that questions about a landowner's level of engagement in an action (part b), as well as motivations and barriers for that action (part c) would be inapplicable to respondents who were unfamiliar with the topic in general. For the 223 familiar respondents who answered all parts of the question, the statement most frequently selected was "I have completed one or more cost share programs in the past", with almost half of respondents selecting this statement (47%) (Figure 26). Overall, 15% of all survey-takers (including both familiar and unfamiliar respondents) had completed a cost share program for their woodland.

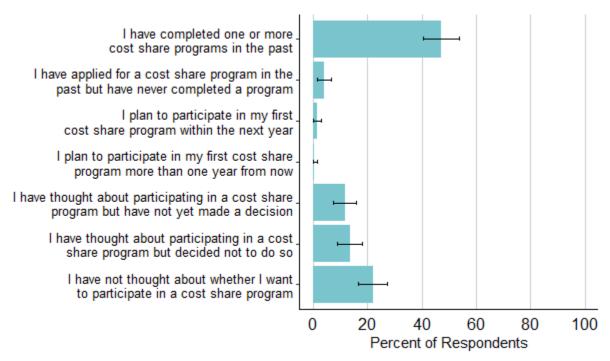


Figure 26.The percentage of respondents who selected the above statements as best describing their thoughts, or personal experience, about participating in a cost share program. Only those who were somewhat, very, or extremely familiar with cost share programs were instructed to answer this question. Respondents could select only one statement.

We analyzed the responses to the barrier and motivation statements in the same manner as the previous four questions. By categorizing respondents as agreeing (slightly or strongly) or not with each statement, the motivation that "cost share programs provide me with valuable information" had the highest levels of agreement (50% of respondents agreed). The statement "cost share programs help me improve an aspect of my land I could not afford otherwise" had similar levels of agreement (49%) (Figure 27). Our results about the motivations for cost share programs were similar to those for conservation easements; most motivations had similar levels of agreement amongst respondents, and no motivation was agreed upon by more than half of respondents. Compared with motivations for Current Use, expert visits, and patch cuts, the motivations for cost share programs have relatively low levels of agreement.

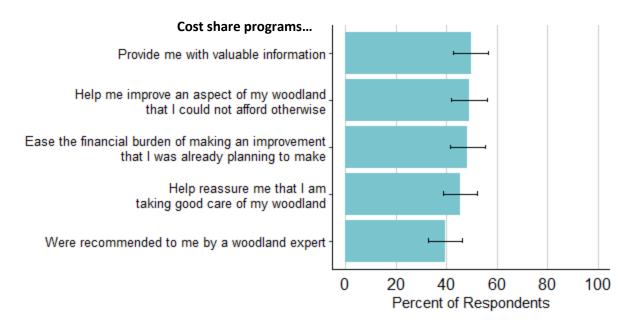


Figure 27. The percentage of respondents who slightly agreed or strongly agree with each of the above motivations for participating in a cost share program. Only those who were somewhat, very, or extremely familiar with cost share programs were instructed to answer this question.

No barriers to applying for cost share programs received more than 50% agreement among respondents. This barrier with the highest level of agreement was "cost share programs are not of interest because I am already taking good care of my woodland" (44% of respondents). The barrier with the second highest level of agreement was "cost share programs are too complicated when administered by the government" (41% of respondents). Interestingly, while 41% agreed that government programs were too complicated to enroll in, only 26% of respondents agreed that the programs were too complicated to enroll in when they are administered by non-governmental groups (Figure 28).

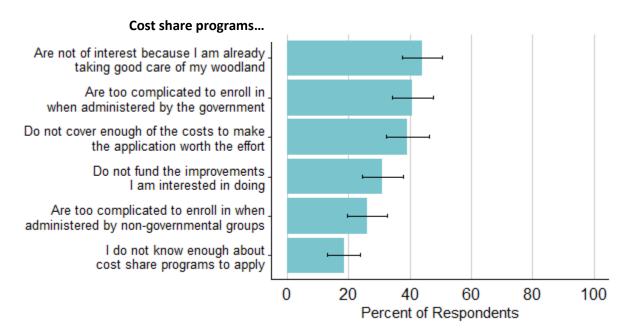


Figure 28. The percentage of respondents who slightly agreed or strongly agree with each of the above barriers against participating in a cost share program. Only those who were somewhat, very, or extremely familiar with cost share programs were instructed to answer this question.

Overall, only 15% of respondents (105 people) had participated in a cost share program. Of those who had participated, the two programs with the highest levels of participation were EQIP (the Environmental Quality Incentives Program) (72 respondents participating) and WHIP (the Wildlife Habitat Incentives Program) (47 respondents participating) (Figure 29). Because a landowner can participate in multiple programs, and because each program had a "do not know" answer choice, the sum of the number of people who participated in each program did not match the overall number of people who had participated in a program. Interestingly, 16 respondents indicated that they had participated in a cost-share program but could not remember the name of it, and between 8 and 20 people indicated they "did not know" if they had participated in each of the listed programs. These findings from the survey corroborated our findings from the interviews, showing that FFOs often remember that they have taken a forest conservation action, but cannot remember the name of the group or program that assisted in taking that action.

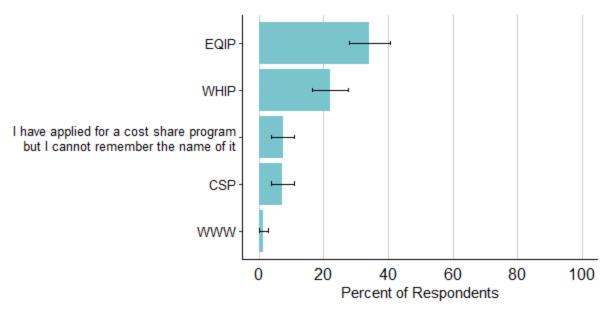


Figure 29. The percentage of respondents who have participated in each of the cost share programs listed above. Only those who were somewhat, very, or extremely familiar with cost share programs were instructed to answer this question.

Information Sources

Respondents were also asked to indicate whether they were interested or not in learning more about a variety of forest conservation topics. Only three topics were interesting to over 50% of respondents, which included the "control of unwanted insects or tree disease" (77% of respondents interested), "wildlife or wildlife habitat" (71% of respondents) and "invasive plants" (70% of respondents) (Figure 30). The topics with the lowest level of interest were "Vermont's Current Use Program" (31% interested) and "arranging for a woodland expert to visit my land" (26% interested). Since 69% of all survey respondents were already enrolled in Current Use and 69% had already had a woodland expert visit their land, we believe respondents were uninterested in learning more about these topics because they were already familiar with these subjects. It is important to note, however, that 51 respondents (7%) wanted information on every subject listed in this question.

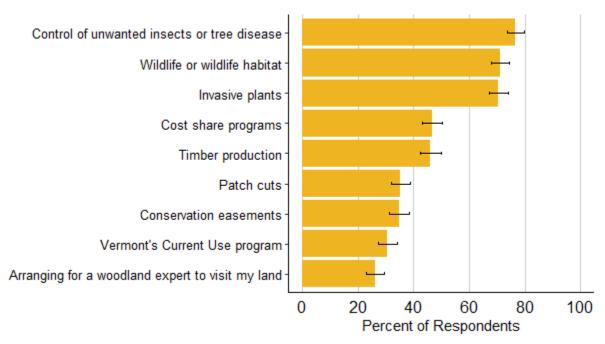


Figure 30. The percentage of respondents who were interested in learning more about each of the above topics regarding the care or protection of their woodland.

Respondents also indicated that the majority of forest-conservation information sources in Vermont were either very trustworthy or extremely trustworthy. Twelve out of fourteen sources listed in the survey were designated as either very or extremely trustworthy by at least half of respondents. The most trusted source, with 81% of respondents indicating it was very or extremely trustworthy, was "a county forester" (Figure 31). The only two sources not trusted by at least half of respondents were "a family member or friend" (rated very or extremely trustworthy by only 38%) and "another woodland owner" (rated very or extremely trustworthy by only 29%). Interestingly, more people found "Vermont Coverts" to be trustworthy than "another woodland owner", suggesting that landowners who represent an organization are seen as more trustworthy than those who do not. One limitation of the response choices "another woodland owner" and "a family member or friend" was that there may have been several ways to interpret these phrases; we do not know if the respondent was averaging the trustworthiness of all fellow woodland owners and family/friends, or if they were considering only those whose knowledge/opinions they respected.

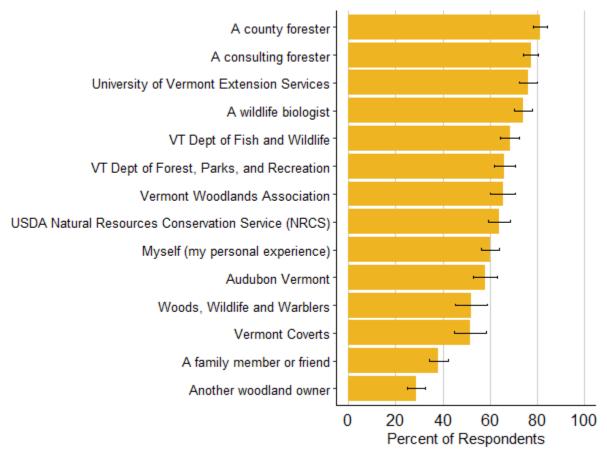


Figure 31. The percentage of respondents who stated that each of the above sources of information were very trustworthy or extremely trustworthy.

While many respondents agreed on the trustworthiness of various information sources, they had less agreement on the method by which they would prefer to receive information. Receiving a brochure, magazine, or other written material was the only information dissemination method that over half of respondents would prefer. The method that the fewest people preferred (only 29%) was to attend on online workshop/class (Figure 32). Importantly, many people were interested in receiving information through multiple methods. In fact, 67 respondents (9%) wanted to receive information through every method listed in this question.

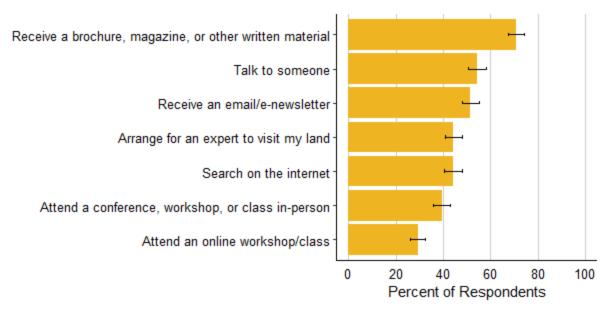


Figure 32. The percentage of respondents who would prefer to receive information/advice about the care or protection of their woodland via each of the above methods.

We concluded the information sources section of the survey by asking participants two specific questions about their knowledge about, and interaction with, woodland experts. When asked whether they knew if there was a woodland expert in their area who would visit their woodland free of charge, only 32% of respondents knew of such an expert (Figure 33). Since 69% of respondents indicated that an expert had already visited their land in a previous section of the survey, but only 32% knew of a free expert in their area, there is clearly a gap in knowledge about free/local services even amongst those who have been visited by an expert. With less than a third of respondents aware of free, relatively local services available to them (e.g. county foresters, experts from non-governmental groups, etc.), it appears that effective information about these sources is highly needed.

We also asked participants if they had ever spoken to an expert about improving wildlife habitat on their woodland. Only about 45% of respondents stated that they had spoken to an expert about this topic (Figure 33). With wildlife ranking highly within the list of motivations for patch cuts and conservation easements, as well as very high levels of participation in wildlifespecific forest management activities, we believe that experts should address the topic of wildlife with Vermont FFOs more frequently if they wish to increase overall levels of participation in forest conservation practices.

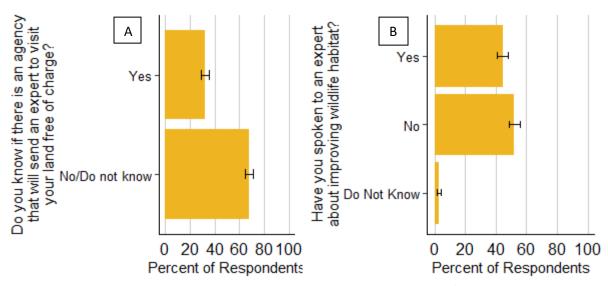


Figure 33. (A) The percentage of respondents who know (yes) or do not know (No/do not know) if there is an agency, organization, or program in their area that will send a woodland expert to visit their land in Vermont free of charge. (B) The percentage of respondents have (yes), have not (no), and do not know if they have ever spoken to an expert about improving wildlife habitat on their woodland.

General Questions about You

We collected basic demographic information about the respondents to our survey and found that the majority of respondents were male (75%)(Figure 34), between ages 60 and 69 (35%)(Figure 35), had an advanced degree (33%)(Figure 36), and did not consider themselves to be a member of any conservation or natural resource organizations (72%)(Figure 37). It is important to note that these demographics represent only the primary decision-maker for the woodland; we did not collect additional demographic information for woodlands owned by more than one person. Our findings about the demographics of the primary-decision maker align with the demographic information collected for Vermont FFOs as part of the National Woodland Owner Survey in 2018 (Butler et al. 2020). However, one limitation of this approach was that we were unable to learn about all of the owners of a woodland, who in reality may have equal or nearly equal input in decisions regarding their woodland compared to the primary decision-maker. Understanding the demographics of Vermont family forest owners is important to help with the development of messaging aimed at increasing engagement in forest conservation practices.

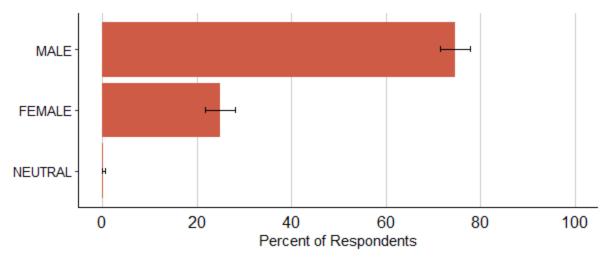


Figure 34. The percentage of respondents who described their gender as male, female, or other.

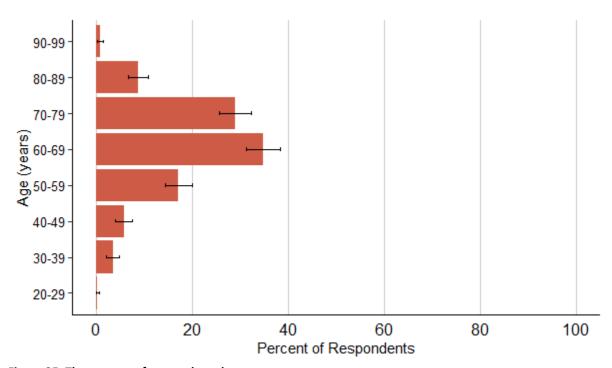


Figure 35. The percent of respondents by age category.

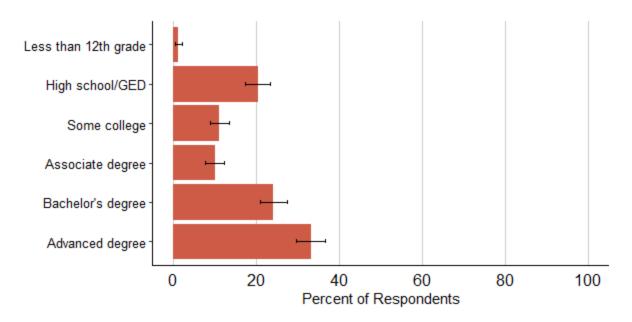


Figure 36. The percent of respondents by highest degree of education.

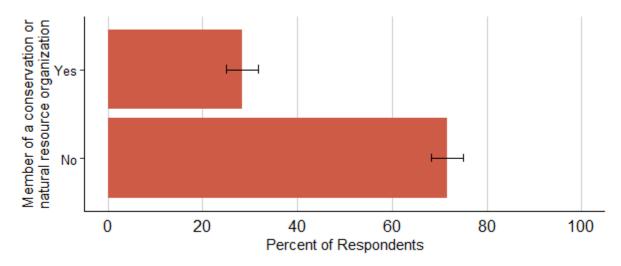


Figure 37. The percentage of people who stated "yes" or "no" in response to the question "Are you a member of any conservation or natural resource management organization?"

Conclusion

Between February and June 2020, we collected 712 completed survey responses from Vermont family forest owners with 10+ acres of woodland. Respondents commonly held pluralistic views towards wildlife, and the vast majority had conducted an activity to help wildlife in the past. Respondents valued woodland stewardship, and were often motivated to conduct conservation activities if these activities helped protect the overall health of their woodland or created wildlife habitat. Surprisingly, over 2/3rds of respondents had had an expert visit their woodland, but only 32% knew of an expert in their area who would visit their land free of charge. The conservation activity that respondents were most familiar with was

enrolling in Vermont's Current Use Program, while the activity they were least familiar with was applying for a cost-share program.

Our results indicate that the overall lack of familiarity respondents had with patch cuts, conservation easements, and cost-share programs was the largest barrier they faced against taking these actions. For these three actions, the number of respondents who stated that they were unfamiliar with the topic was greater than the number of respondents who agreed on any other barrier statement. In contrast, the percentage of respondents unfamiliar with the Current Use Program was relatively low. For enrolling in the Current Use program, the greatest barrier was "I do not want anybody telling me what to do on my land" (40% of all respondents agreeing). While familiarity was not directly measured for expert visits, the greatest barrier was "I do not need expert advice to keep my woodland healthy", which was agreed upon by a relatively small percentage of respondents (21% of all respondents agreeing).

In a forthcoming analysis, we plan to use the data from this survey to further explore how motivations and barriers influence a respondent's level of engagement with each of the five conservation actions. Using cross tabulations and modeling, we plan to segment landowners based on their stage of engagement with each activity and compare the barriers and motivations emphasized by these groups. We hypothesize that landowners at different levels of engagement (e.g. planning to take an action within the next year versus having never thought about taking this action) will be associated with different sets of motivations and barriers. Furthermore, we hypothesize that some information delivery methods will be more preferred over others depending on the landowners' stage of engagement. For example, we predict that providing written materials that a landowner can review on their own may help build rapport and lead to further action more frequently than other forms of information for landowners at lower levels of engagement.

Understanding the characteristics, attitudes, and behaviors of Vermont's family forest owners is important for policy makers, service providers, resource managers, and educators who want to increase engagement in forest conservation activities. Conservation assistance programs can help increase landowner engagement, but only if these programs are effective at recruiting unengaged landowners or helping partially engaged landowners to follow-through with an action. By providing FFOs with information about the benefits of these programs and addressing their barriers to taking action, providers can increase the efficacy of these programs and better serve landowners while promoting the health of forests and wildlife.

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Appendix 1 – Survey Methods

Study Area and Sample Frame

The quantitative portion of this study sampled family forest owners from across the state of Vermont, USA. To contact FFOs who owned land in Vermont, we mailed surveys to the FFO's primary address, including both domestic and international addresses. We used the 2017 Vermont Grand List, administered by the Vermont Department of Taxes, as our sample frame. This list provides parcel ownership information for the state of Vermont, including owner name(s), owner's primary address, and parcel size. We used the 2017 Grand List because it was the most recent list available when this project began in 2018.

Sample Selection

From the Vermont Grand List, we selected 3000 parcels equal to or over ten acres in size, with the intent to eventually create a final sample of about 2000 Vermont FFOs. The 3000 parcels were selected using a probability proportional to size (PPS) sampling strategy, where the probability of selecting a parcel is proportional to the size of the parcel (Dickinson and Butler 2013). We chose to use PPS because our sample frame contained a much larger proportion of smaller-acreage parcels than larger acreage parcels, and using a completely random sample design might have left us with no representation of large acreage parcels. The PPS strategy provided a range of acreage sizes on a continuous scale, and eliminated the need to stratify based on artificial acreage size categories.

Next, we manually categorized each parcel by its ownership type (FFO vs. non-FFO) based on the name of the parcel owner. Non-FFO parcels were removed from the sample. If the same landowner(s) owned more than one parcel, the parcel with the highest ObjectID number was selected to represent that owner to ensure that no landowner received multiple surveys. Our final sample consisted of 2122 unique ownerships. With a target sample size of 2000 FFOs, a sample size of 2122 was appropriate to account for an estimated number of surveys that would be undeliverable.

Our target sample size of 2000 FFOs was determined through the combination of a power analysis and cooperation rate projections. Using the Dillman et al. (2014) method for conducting a power analysis with a population of over 10,000 people on a binary question with a 50/50 split, we determined that contacting 2000 FFOs would provide results with a 95% confidence level and a +/- 3% margin of error. We chose a 95% confidence level and a +/- 3% margin of error because these rates would allow for robust estimates, and because these levels are considered standard by other high quality surveys (Leiserowitz et al. 2018, Dillman et al. 2014, Teel et al. 2005).

Data Collection and Processing

We used the Dillman et al. (2014) tailored design method to implement the surveys. Implementation consisted of four waves of mailing, followed by a telephone follow-up for a selection of those who did not respond. Directly prior to the first mailing, the addresses in our

mailing list were compared with the United States Postal Service's National Change of Address (NCOA) database, and addresses were updated based on NCOA records. The first mailing consisted of a pre-notice postcard, which was sent to alert our sample FFOs that a questionnaire would be arrive soon. About one week later, the FFOs received a questionnaire with a cover letter that described the purpose and importance of the survey and a pre-paid, pre-addressed return envelope. Two weeks after the survey was mailed, a reminder/thank you postcard was sent to thank those who responded and to encourage non-respondents to respond. Three to four weeks after the reminder/thank you postcard, a second questionnaire and cover letter with a pre-paid and pre-addressed return envelope was sent to our sample FFOs who had not yet responded. All mailings occurred between January 27th, 2020 and March 17th, 2020.

We processed completed questionnaires using an automated routine that relies on optical character recognition (OCR) and optical mark recognition (OMR) technology (TeleForm by Verity Inc. 2010). We scanned paper questionnaires and produced digital documents, which were read by software that extracts the data. Each response was reviewed to discern the respondent's intent and to ensure the software's accuracy. The verified data were then exported to a database, where we manually performed checks to eliminate illogical responses. Surveys returned by FFOs outside the scope of our project (e.g. owned less than 10 acres of land, had recently moved out of state, etc.) were removed the dataset, as well as any surveys that were less than 75% complete. We used the responses from 712 complete surveys to conduct our analysis. Missing values were imputed using the MICE package in the statistical software R (version 4.0.2)

For those FFOs who did not respond to the mail inquiries, we purchased telephone numbers from Dataman Group to conduct a nonresponse assessment. Using Cohen's power analysis with a desired effect size of 0.6, a significance level of 0.05, and a power of 0.9, we determined that 31 nonresponders would need to be contacted. Thirty-three qualified nonresponders were successfully contacted, although three were later removed from the analysis because they returned completed surveys. We asked each nonresponder to answer the same six questions, which had been drawn from the survey based on our prediction that the responses to these questions would vary the most between survey responders and nonresponders. Using Pearson's chi-squared test, we measured the difference between respondents and non-respondents for six variables. Five variables (representing acres of woodland owned, whether trees had been cut for sale, whether an expert had visited, whether a cost share program had been completed, and age) showed no significant difference between respondents and non-respondents (p=0.05). However, respondents were significantly more likely to identify as male than non-respondents.

Survey Instrument

[see following pages]

Vermont Woodlands and Wildlife Survey











University of Massachusetts





Instructions

Please answer the following questions based on the property you own in Vermont. If you own more than one property in Vermont, please answer the questions based on your largest wooded property.

- "Woodland" or "wooded property" is defined as an area with trees, at least one acre in size, that is not mowed. It does not include Christmas tree farms, orchards, or nurseries.
- If your largest wooded property in Vermont is owned by more than one person, the owner who makes most of the decisions about the woodland should answer this questionnaire.
- If you do not currently own land in Vermont, please write "No Land Owned" on the cover of this questionnaire. Leave the rest of the questionnaire blank and return it in the postage-paid envelope provided.

	eneral Questions about your Ownership a) How many acres of land do you currently own in Vermont?
	If you own more than one property in Vermont, please answer this question, and all of the following questions, based on your largest property.
	Acres of Land
	b) About how many acres are wooded?
	Acres of Woodland
2.	In what year did you acquire your woodland in Vermont?
	Year
3.	Is your home (primary residence) on or within a mile of your woodland in Vermont?
	☐ Yes ☐ No
4. 4.	Is your woodland part of a farm?
	☐ Yes ☐ No

5. How important are the following reasons for why you currently own your woodland in Vermont? Please check only one box for each statement. Ad important importance important important Ad amplicable To enjoy beauty or scenery To protect nature or biological П П П diversity To protect water resources \Box П П To protect or improve wildlife habitat For land investment \Box For privacy To raise my family To pass land on to my children or other heirs For firewood П П П П П For timber products, such as logs or П pulpwood For nontimber forest products, such as berries or maple syrup For hunting П For recreation, other than hunting Other (Please specify):

6. Below are statements that represent a value about fish and wildlife. To what extent with each statement? <i>Please check one</i>	nat extent do you agree or disagree									
		وي ند لال	ay disa	ge age	ing dist					
	Stron	ir Slig	r Zeir	i Slig	Shour					
Humans should manage fish and wildlife populations so that humans benefit										
The needs of humans should take priority over fish and wildlife protection										
Fish and wildlife are on earth primarily for people to use										
We should strive for a world where there is an abundance of fish and wildlife for hunting and fishing										
Hunting is cruel and inhumane to animals										
Hunting does not respect the lives of animals										
People who want to hunt should be provided the opportunity to do so										
We should strive for a world where humans and wildlife and fish can live side by side without fear										
I view all living things as part of one big family										
Animals should have rights similar to the rights of humans										
Wildlife are like my family and I want to protect them										
I care about animals as much as I do other people										
I feel a strong emotional bond with animals										
I value the sense of companionship I receive from animals										



History of Your Woodland

7. For which of the following reasons, if any, have trees been cut or removed from your woodland in Vermont since you have owned it? *Please check either "Yes" or "No" for each activity.*

Yes	No	Activity
		For sale
		For personal use
		To improve forest health
		To improve wildlife habitat
		To clear or maintain space for a field, pasture, or cropland
		To clear or maintain space for a house, barn, or other building

8. Which of the following activities, if any, have you conducted for the purpose of helping wildlife on your woodland in Vermont? *Please check either "Yes" or "No" for each activity*.

Yes	No	Activity
		Removed invasive plants
		Piled brush or branches to create habitat
		Created or updated a forest management plan to specifically include activities for helping wildlife
		Minimized harvesting or mowing during bird breeding season (May to mid-July)
		Left dead or dying trees to maintain or create habitat
		Cut trees to maintain or create habitat
		Maintained or created a food plot to provide food for wildlife
		Planted apple trees, or helped apple trees grow, to provide food for wildlife
		Planted oak trees, or helped oak trees grow, to provide food for wildlife
	Yes	Yes No

Current Use Program

9. Vermont's Use Value Appraisal (UVA) program, often called the "Current Use" or "Land Use" program, reduces property taxes for qualified woodland owners by calculating taxes based on the value the land for forestry, rather than its fair market (typically development) value.											
a		How familiar are you with Vermont's Current Use Program? <i>Please elect only one statement</i> .									
If you check		☐ I have never heard of the term "Current Use Program"									
eithei these boxes	r of two	I have heard of the term "Current Use Program" but I do not know much about it									
pleas	e sk										
to qu #10	еѕпо	☐ I am very familiar with the Current Use Program									
		I am extremely familiar with the Current Use Program									
b	e	Which statement below best describes your thoughts, or personal experience, about enrolling your woodland in Vermont's Current Use Program? <i>Please select only one statement</i> .									
		My land is currently enrolled in Current Use									
		My land was enrolled in Current Use, but now it is not									
		I am in the process of enrolling my land now									
		I plan to begin the Current Use application within the next year									
		I plan to begin the Current Use application more than one year from now									
		have thought about enrolling my land in Current Use, but have not yet made a decision									
5		I have thought about enrolling my land in Current Use, but decided NOT to enroll									
22757		I have thought about enrolling my land in Current Use, but									
22		my land does not qualify for the program I have not thought about whether I want to enroll my land in									
		Current Use									

statements about enrolling <u>your</u> woodland in Vermont's Current Use Program? <i>Please select only one box for each statement.</i>									
	disaglee								
		गुत्र गुन्ह	igies Georgies	igiec age	e not strongly strongly	Jo not V			
	Stron	Sligh	t S eil	Glig	gu Shone	Doug			
I want to have the option to develop my land in the future									
I want to reduce my taxes									
I want my land to stay undeveloped									
Current Use does not give me enough flexibility to cut trees when I need to									
Current Use requires me to cut trees that I do not want to cut									
I (or my family) could not afford to keep my land without Current Use									
Enrolling in Current Use is not worth the effort									
The forestry practices required by Current Use help keep my woodland healthy									
I do not know enough about Current Use to enroll									
I do not want anybody telling me what to do on my land									

c) How much do you agree or disagree with each of the following

Expert Visits

- 10. To learn more about their woodland, Vermont landowners can arrange a visit with a woodland expert to walk their land and answer questions/provide personalized advice. Experts include foresters, biologists, and fellow landowners who represent both government agencies and non-governmental groups. Depending on the type of expert, landowners may pay for the visit or receive the visit free of charge.
 - a) Who, if any, of the following experts have visited your woodland? *Please select either "Yes", "No" or "Do Not Know" for each expert.*

	Yes	No	Do Not Know	Woodland Expert			
				Vermont county forester			
				Consulting forester/private consultant			
	□ □ □ Natural Resources Conservation Service (NRCS) employee						
				Vermont Fish and Wildlife employee			
				Audubon Vermont representative			
				A knowledgeable fellow landowner (such as a Vermont Coverts or Tree Farm participant)			
b)	exp	erien	ce, about	pelow best describes your thoughts, or personal arranging for a woodland expert to visit <u>your</u> only <u>one</u> statement.			
	Av	voodl	and expe	rt has visited my land			
		n curi wood	-	the process of arranging for an expert to visit			
С] I pl	an to	arrange a	a visit with an expert within the next year			
	I pl		arrange a	a visit with an expert more than one year from			
Е			ought ab	out arranging a visit with an expert, but have cision			
Г	₇ I ha	ave th		out arranging a visit with an expert, but			
			ot though and expe	t about whether I want to arrange a visit with			



	Strong diengte diengte enthiengte police dien diengte diengte enthiengte diengte dieng						
	á	gh Jiza	agee Ay disa	gi dge	and Strong	A DO DO	
	Stron	Sligh	- deils	Sid	Stroit.	200	
A visit from an expert is too costly							
A visit from an expert helps me learn something new about my land	П						
A visit from an expert is the best way to get personalized information about my woodland							
A visit from an expert gives me reassurance that I am taking good care of my woodland							
Is it not worth the effort/time to request or schedule a visit with an expert							
There are no woodland experts that provide the information I want							
I do not know which woodland expert would be able to help me							
I do not need expert advice to keep my woodland healthy							

c) How much do you agree or disagree with each of the following

Patch Cuts

	acre	patch cut" describes an area of woodland, between 1/2 acre and 5 s in size, in which all or most of the trees have been cut to open canopy and allow plants/trees to grow back naturally.					
a)		y familiar are you with patch cuts? Please select only one ement.					
If you check		☐☐ I have never heard of the term "patch cut"					
either these boxes	two	I have heard of the term "patch cut" but I do not know much about it					
pleas to que	e skij	1					
#12	esiioi	☐ I am very familiar with patch cuts					
		☐ I am extremely familiar with patch cuts					
-	expe	ich statement below best describes your thoughts, or personal erience, about making a patch cut on <u>your</u> woodland? <i>Please ct only <u>one</u> statement</i> .					
		I have completed a patch cut on my woodland					
		I am in the process of making my first patch cut on my woodland now					
		I plan to make my first patch cut within the next year					
		I plan to make my first patch cut more than one year from now					
		I have thought about making my first patch cut, but have not yet made a decision					
		I have thought about making a patch cut, but decided NOT to make this type of cut					
8		I have not thought about whether I want to make a patch cut on my woodland					
" !≿							



c) How much do you agree or disagree with each of the following statements about making a patch cut on <u>your</u> woodland? *Please select only one box for each statement.*

		٠.٠	agjee.	ngjee ,	ee hat dise	, we
Making a patch cut	Stro	ngly di	anly dis	ither all	dhily ab	do d
Helps establish young trees on my woodland						
Improves the habitat for some animals						
Improves the hunting on my land						
Is good for the overall health of my woodland						
Is not worth the effort/time						
Looks ugly						
Was recommended to me by a woodland expert						
Will harm the types of wildlife I care about						
Will cause me to lose income						
Will encourage the growth of unwanted plants/trees						

Conservation Easements

		onservation organization, which permanently prevents the land from eing developed. This is commonly called a "conservation easement."
a)		low familiar are you with conservation easements? Please select online statement.
If you check		☐ I have never heard of the term "conservation easement"
either these	· of two	I have heard of the term "conservation easement" but I do not know much about it
boxes please	e ski	
to que #13	estio	 I am very familiar with conservation easements
		☐ I am extremely familiar with conservation easements
b)	e	Which statement below best describes your thoughts, or personal experience, about putting a conservation easement on all or part of our woodland? <i>Please select only one statement</i> .
		I currently have a conservation easement on all or part of my woodland
		I plan to put a conservation easement on my woodland within the next year
		I plan to put a conservation easement on my woodland <u>more</u> than one year from now
		I have thought about putting a conservation easement on my woodland, but have not yet made a decision
		I have thought about putting a conservation easement on my woodland, but decided NOT to do so
		I have not thought about whether I want to put a conservation easement on my woodland
_		

12. Land development rights can be sold or voluntarily given away to a



c) How much do you agree or disagree with each of the following statements about putting a conservation easement on all or part of your woodland? <i>Please select only one box for each statement.</i>									
	cttor	aligh gly disa	gjee disa	igee ige age	e nor disafe e nor disafe e hondi	John John Jes	Krow		
The process of getting an easement is not worth the effort/time									
The process of getting an easement is too expensive									
I cannot find a conservation organization/land trust willing to hold an easement on my woodland							•		
I do not know how to put a conservation easement on my woodland									
I do not trust conservation organizations/land trusts									
A conservation easement would reduce the value of my property									
I want to have the ability to develop my woodland									
I want future generations to have the ability to develop my woodland									
I want a conservation easement on my woodland to help preserve the characte of Vermont	r□								
I want a conservation easement on my woodland to protect the overall health of the land									
I want a conservation easement on my woodland as a legacy for future generations									
I want a conservation easement on my woodland to help wildlife									

Cost Share Programs

- 13. Cost share programs provide financial assistance to qualified woodland owners to conduct specific conservation activities on their land, such as removing invasive plants, creating a forest management plan, or enhancing wildlife habitat. Funding for cost share programs can come from federal, state, or non-governmental groups, such as the Natural Resources Conservation Service (NRCS) or the Woods, Wildlife and Warblers program.
- a) How familiar are you with cost share programs for woodland owners? Please select only one statement. If you ☐ I have never heard of the term "cost share program" checked either of ☐ I have heard of the term "cost share program" but I do these two not know much about it boxes please skip ☐ I am somewhat familiar with cost share programs to question #14 ☐ I am very familiar with cost share programs ☐ I am extremely familiar with cost share programs b) Which statement below best describes your thoughts, or personal experience, about participating in a cost share program for your woodland? Please select only one statement. ☐ I have completed one or more cost share programs in the past I have applied for a cost share program in the past, but have never completed a program ☐ I am currently participating in my first cost share program now I plan to participate in my first cost share program within the next vear I plan to participate in my first cost share program more than one year from now I have thought about participating in a cost share program, but have not yet made a decision I have thought about participating in a cost share program, but decided NOT to do so I have not thought about whether I want to participate in a cost



share program

c) How much do you agree or disagree with statements about participating in a cost conservation activity on your woodland box for each statement.	share	prog	gram	to co	onduct	
Cost share programs	Stron	Slight Slight	iglee ily diso	gee gge gja	one From display From Display Strongly Strongly	Jo nat kn
Are not of interest because I am already taking good care of my woodland						
Are too complicated to enroll in when administered by the government						
Are too complicated to enroll in when administered by non-governmental groups						
Do not cover enough of the costs to make the application worth the effort						
Do not fund the improvements I am interested in doing						
Ease the financial burden of making an improvement that I was already planning to make						
Help me improve an aspect of my woodland that I could not afford otherwise	, 🗆					
Help reassure me that I am taking good care of my woodland						
Provide me with valuable information						
Were recommended to me by a woodland expert						
I do not know enough about cost share programs to apply						

13. d) Are you currently participating, or have you already participated, in any of the following cost share programs? *Please select either"Yes"*, "No" or "Do Not Know" for each program.

		Do No	ot en
Yes	No	Know	Cost share program
			EQIP, the Environmental Quality Incentives Program
			CSP, the Conservation Stewardship Program
			WHIP, the Wildlife Habitat Incentives Program
			The Woods, Wildlife and Warblers cost share program
			I have applied for a cost share program, but I cannot remember the name of it
			Other (please specify):

Information Sources

14. Which of the following topics regarding the care or protection of your woodland, if any, are you interested in learning more about? *Please selected either "Yes" or "No" for each topic.*

Yes	No	I am interested in learning more about
-----	----	--

	Control of unwanted insects or tree diseases
	Wildlife or wildlife habitat
	Timber production
	Conservation easements
	Invasive plants
	Vermont's Current Use Program
	Arranging for an expert to visit my land
	Cost share programs
	Patch cuts
	Other (please specify):



1.	information about the care or protection of your woodland? Please select only one box for each information source. A consulting forester.									
	SC	ource.					AISTWO!	MONTH	rustwo aris	TH TUSTWO!
						a all	ile litie	rwhat.	TUSTAIC	HI KID
					4	Z'O P'	ill Sou	7524	Extre	Doug
	A	consultir	g fore	ster						
	A	county fo	orester							
	A	family m	ember	or friend						
	A	wildlife l	biologi	st						
	Ar	other wo	oodlan	d owner						
	M	yself (my	perso	nal experience)						
	Αι	idubon V	ermor	nt						
		ermont C								
	Ve	ermont W	oodla	nds Association						
	W	oods, Wi	ldlife a	and Warblers						
	University of Vermont Extension Service			es						
	Vermont Department of Forest, Parks and Recreation									
	Vermont Fish and Wildlife Department									
	USDA Natural Resources									
	Conservation Service (NRCS)									
			•	refer to receive informa						
			•	rotection of your wood or "No" for each inform				ne: 1	rieuse	•
		Yes	No	I would prefer to						
				Talk to someone						
				Arrange for an expert	to vi	sit m	y lan	d		
	Ī			Receive a brochure, m	nagaz	ine, o	or oth	ner w	ritten	material
				Attend a conference, workshop, or class in-person						
				Search on the internet						
				Receive an email/e-newsletter						
				Attend an online work	shop	/clas	S			
				Other (please specify)	:					

17.	Do you know if there i your area that will send wildlife biologist, or kn your land in Vermont f	d a woodland expert (nowledgeable fellow	such as a forester,
	□Yes	□No	☐ Do Not Know
	Figure 1. If yes, what is the r	name of this agency, o	organization, or program?
18.	Have you ever spoken on your woodland in V		proving wildlife habitat
	☐ Yes	□No	☐ Do Not Know
Ge	neral Questions About	t You	
19.	What is your gender?		
20.	What is your age?		
	Years		
21.	What is the highest deg	gree or level of school	l you have completed?
	☐ Less than 12th grad	de	
	☐ High school/GED		
	☐ Some college		
	☐ Associate degree		
	☐ Bachelor's degree		
	☐ Advanced degree		



22. Are you a member of any conmanagement organizations?	servation or natural resource
□Yes	□No
J.	
•	
If yes, please list them:	
If there are any additional comm share, please list them below:	nents or concerns you would like to

Thank you for participating in this survey! Please return the questionnaire in the postage-paid envelope provided. If you would like a copy of the results of this survey, print your name and address on the back of the return envelope.

Comments or questions? Please contact us:

Family Forest Research Center 160 Holdsworth Way Amherst, MA 01003

Telephone: (413) 687-1908

Email: meharrington@umass.edu

Version: VWW 1.0



Appendix 2 - Summary of Survey Results by Question

1a. How many acres o	f land do you current o	own in Vermont? (acres)
Min. : 10.0		
1st Qu.: 60.0		
Median: 125.0		
Mean : 260.9		
3rd Qu.: 271.2		
Max. :10000.0		

1b. How many acres are wooded? (acres)	
Min. : 10.0	
1st Qu.: 43.0	
Median: 91.0	
Mean : 193.1	
3rd Qu.: 187.8	
Max. :10000.0	

2. In what year did you acquire your woodland in Vermont?
Min. :1932
1st Qu.:1982
Median :1995
Mean :1993
3rd Qu.:2004
Max. :2019

3. Is your home (primary residence) on or within a mile of your woodland in Vermont?
Yes:473
No :239

4. Is your woodland part of a farm?
Yes:264
No :448

5. How important are the following reasons for why you currently own your woodland in Vermont?

To enjoy beauty or scenery	To protect nature or biological diversity	To protect water resources
Not important : 16	Not important : 11	Not important : 20
Of little importance: 19	Of little importance: 25	Of little importance: 60
Moderately important: 59	Moderately important:110	Moderately important:121
Important :166	Important :183	Important :178
Very important :440	Very important :371	Very important :305
Not applicable : 12	Not applicable : 12	Not applicable : 28

To protect or improve wildlife habitat	For land investment	For privacy
Not important : 6	Not important :127	Not important : 41
Of little importance: 23	Of little importance:146	Of little importance: 42
Moderately important: 86	Moderately important:159	Moderately important:105
Important :189	Important :115	Important :182
Very important :400	Very important :127	Very important :316
Not applicable : 8	Not applicable : 38	Not applicable : 26

To raise my family	To pass land on to my children or other heirs	For firewood
Not important : 95	Not important : 59	Not important :101
Of little importance: 48	Of little importance: 58	Of little importance:144
Moderately important: 79	Moderately important:119	Moderately important:171
Important :103	Important :138	Important :142
Very important :229	Very important :274	Very important :123
Not applicable :158	Not applicable : 64	Not applicable : 31

For timber products, such as logs or pulpwood	For non-timber products, such as berries or maple syrup	For hunting	
Not important :116	Not important :148	Not important :204	
Of little importance:136	Of little importance:171	Of little importance:117	
Moderately important:187	Moderately important:113	Moderately important: 78	
Important :137	Important :104	Important :103	
Very important :105	Very important :106	Very important :180	
Not applicable : 31	Not applicable : 70	Not applicable : 30	

ther than hunting
: 45
ce: 59
rtant:125
207
:251
: 25

6. Below are statements that represent a variety of ways people feel about fish and wildlife. To what extent do you agree or disagree with each statement?

and wildlife populations so that		The needs of humans should take priority over fish and wildlife protection		Fish and wildlife a	
Strongly disagree	:100	Strongly disagree	:248	Strongly disagree	:330
Slightly disagree	:126	Slightly disagree	:181	Slightly disagree	:128
Neither agree nor disagree:164		Neither agree nor	disagree:130	Neither agree nor	disagree:133
Slightly agree	:159	Slightly agree	:105	Slightly agree	: 75
Strongly agree	:163	Strongly agree	: 48	Strongly agree	: 46

We should strive for a world where there is an abundance of fish and wildlife for hunting and fishing	Hunting is cruel and inhumane to animals	Hunting does not respect the lives of animals	
Strongly disagree : 57	Strongly disagree :351	Strongly disagree :352	
Slightly disagree : 57	Slightly disagree :123	Slightly disagree :131	
Neither agree nor disagree:163	Neither agree nor disagree:141	Neither agree nor disagree:137	
Slightly agree :193	Slightly agree : 60	Slightly agree : 52	
Strongly agree :242	Strongly agree : 37	Strongly agree : 40	
People who want to hunt should be provided the opportunity to do so	We should strive for a world where humans and wildlife and fish can live side by side without fear	I view all living things as part of one big family	
Strongly disagree : 30	Strongly disagree : 57	Strongly disagree : 46	
Slightly disagree : 38	Slightly disagree : 47	Slightly disagree : 38	
Neither agree nor disagree:106	ragree nor disagree:106 Neither agree nor disagree:175		
Slightly agree :232	Slightly agree :135	Slightly agree :187	
Slightly agree 1232	1 0 7 0	, , ,	

Animals should have rights similar to the rights of humans		Wildlife are like my family and I want to protect them		I care about animals as much as I do other people	
Strongly disagree	:195	Strongly disagree	: 84	Strongly disagree	:156
Slightly disagree	:130	Slightly disagree	: 91	Slightly disagree	:150
Neither agree nor	disagree:178	Neither agree nor	disagree:227	Neither agree nor	disagree:138
Slightly agree	:133	Slightly agree	:195	Slightly agree	:170
Strongly agree	: 76	Strongly agree	:115	Strongly agree	: 98

6. (cont.)

I feel a strong emotional bond with animals	I value the sense of companionship I receive from animals
Strongly disagree : 64	Strongly disagree : 44
Slightly disagree : 87	Slightly disagree : 45
Neither agree nor disagree:164	Neither agree nor disagree:161
Slightly agree :234	Slightly agree :224
Strongly agree :163	Strongly agree :238

7. For which of the following reasons, if any, have trees been cut or removed from your woodland in Vermont since you have owned it?

For sale:	For personal use:	To improve forest health:	To improve wildlife habitat:	To clear or maintain space for a field, pasture, or cropland:	To clear or maintain space for a house, barn, or other building:
Yes:429	Yes:544	Yes:594	Yes:489	Yes:316	Yes:220
No :283	No :168	No :118	No :223	No :396	No :492

8. Which of the following activities, if any, have you conducted for the purpose of helping wildlife on your woodland in Vermont?

Removed invasive plants	Piled brush or branches to create habitat	Created or updated a forest management plan to specifically include activities for helping wildlife	Minimized harvesting or mowing during bird breeding season (May to mid-July)	Left dead or dying trees to maintain or create habitat	Cut trees to maintain or create habitat
Yes:313	Yes:473	Yes:383	Yes:368	Yes:595	Yes:400
No :399	No :239	No :329	No :344	No :117	No :312

8. (cont).

Maintained or created a food plot to provide food for wildlife	Planted apple trees, or helped apple trees grow, to provide food for wildlife	Planted oak trees, or helped oak trees grow, to provide food for wildlife
Yes:224	Yes:407	Yes:193
No :488	No :305	No :519

9a. How familiar are you with Vermont's Current Use P	rogram?
I have never heard of the term "Current Use Program"	: 26
I have heard of the term "Current Use" but I do not know	w much about it: 75
I am somewhat familiar with the Current Use Program	:125
I am very familiar with the Current Use Program :271	
I am extremely familiar with the Current Use Program	:215

9b. Which statement below best describes your thoughts, or personal experience, about enrolling your woodland in Vermont's Current Use program?
My land is currently enrolled : 489
My land was enrolled in the past but now it is not : 15
I am in the process of enrolling my land now: 1
I plan to begin the application within one year : 5
I plan to begin the application more than one year from now : 1
I have thought about enrolling my land but have not yet made a decision: 32
I have thought about enrolling my land but decided not to enroll: 33
I have thought about enrolling my land but my land does not qualify: 20
I have not thought about whether I want to enroll my land: 15
Question skipped due to skip pattern: 101

9c. How much do you agree or disagree with each of the following statements about enrolling your woodland in Vermont's Current Use Program?

I want to have the option to develop my land in the future	I want to reduce my taxes	I want my land to stay undeveloped	Current Use does not give me enough flexibility to cut trees when I need to	
Strongly disagree :137	Strongly disagree : 13	Strongly disagree: 13	Strongly disagree :199	
Slightly disagree : 68	Slightly disagree: 7	Slightly disagree : 11	Slightly disagree :110	
Neither agree nor disagree: 122	Neither agree nor disagree: 37	Neither agree nor disagree: 65	Neither agree nor disagree:146	
Slightly agree :136	Slightly agree : 78	Slightly agree :128	Slightly agree : 47	
Strongly agree :130	Strongly agree :473	Strongly agree :389	Strongly agree : 37	
Do not know : 18	Do not know : 3	Do not know : 5	Do not know : 72	
Question skipped due to skip pattern :101	Question skipped due to skip pattern :101	Question skipped due to skip pattern :101	Question skipped due to skip pattern :101	

9c (cont.):

Current Use requires me to cut trees that I do not want to cut	I (or my family) could not afford to keep my land without Current Use	Enrolling in Current Use is not worth the effort	The forestry practices required by Current Use help keep my woodland healthy
Strongly disagree :199 Slightly disagree : 99	Strongly disagree :118 Slightly disagree : 67	Strongly disagree :366 Slightly disagree : 76	Strongly disagree : 21 Slightly disagree : 22
Neither agree nor disagree:122	Neither agree nor disagree: 91	Neither agree nor disagree: 74	Neither agree nor disagree: 80
Slightly agree : 74	Slightly agree : 85	Slightly agree : 32	Slightly agree :135
Strongly agree : 27	Strongly agree :217	Strongly agree : 21	Strongly agree :295
Do not know : 90	Do not know : 33	Do not know : 42	Do not know : 58
Question skipped due to skip pattern:101	Question skipped due to skip pattern:101	Question skipped due to skip pattern :101	Question skipped due to skip pattern :101

9c (cont.):

I do not know enough about Current Use to enroll	I do not want anybody telling me what to do on my land
Strongly disagree :361	Strongly disagree : 96
Slightly disagree : 54	Slightly disagree: 80
Neither agree nor	Neither agree nor
disagree:111	disagree:142
Slightly agree : 23	Slightly agree :146
Strongly agree : 20	Strongly agree :139
Do not know : 42	Do not know: 8
Question skipped due to skip pattern :101	Question skipped due to skip pattern:101

10a. Who, if any, of the following experts have visited your woodland?

Vermont county forester	Consulting forester/ private consultant	Natural Resources Conservation Service (NRCS) employee	
Yes :429	Yes :472	Yes :150	
No :207	No :200	No :393	
Do not know: 76	Do not know: 40	Do not know:169	

Vermont Fish and Wildlife employee	Audubon Vermont representative	A knowledgeable fellow landowner (such as a Vermont Coverts or Tree Farm participant)	
Yes :143	Yes : 39	Yes :134	
No :403	No :522	No :465	
Do not know:166	Do not know:151	Do not know:113	

10b. Which statement below best describes your thoughts, or personal experience, about arranging for a woodland expert to visit your land?
A woodland expert has already visited :494
I am currently in the process of arranging for an expert to visit my woodland: 6
I plan to arrange a visit with an expert within the next year : 14
I plan to arrange a visit with an expert more than one year from now : 4
I have thought about arranging a visit with an expert, but have not yet made a decision : 46
I have thought about arranging a visit with an expert, but decided not to do so : 17
I have not thought about whether I want to arrange a visit with a woodland expert :131

10c) How much do you agree or disagree with each of the following statements about arranging for a woodland expert to visit your land?

A visit with an expert is too costly	I visit from an expert helps me learn something new about my land	A visit from an expert is the best way to get personalized advice about my woodland	
Strongly disagree :162	Strongly disagree : 15	Strongly disagree : 13	
Slightly disagree : 77	Slightly disagree : 13	Slightly disagree : 28	
Neither agree nor disagree:197	Neither agree nor disagree: 77	Neither agree nor disagree:103	
Slightly agree : 87	Slightly agree :184	Slightly agree :209	
Strongly agree : 36	Strongly agree :378	Strongly agree :321	
Do not know :153	Do not know : 45	Do not know : 38	

10c (cont.):

A visit from an expert gives me reassurance that I am taking good care of my woodland		It is not worth the effort/time to request or schedule a visit with an expert		There are no woodland experts that provide the information I want	
Strongly disagree	: 16	Strongly disagree	:289	Strongly disagree	:354
Slightly disagree :	21	Slightly disagree	:141	Slightly disagree	: 89
Neither agree nor disa	gree:115	Neither agree nor o	disagree:144	Neither agree nor disagree:132	
Slightly agree :1	93	Slightly agree	: 44	Slightly agree : 18	
Strongly agree ::	324	Strongly agree	: 23	Strongly agree	: 9
Do not know :	43	Do not know	: 71	Do not know	:110

I do not know which woodland expert would be able to help me	I do not need expert advice to keep my woodland healthy	
Strongly disagree :230	Strongly disagree :219	
Slightly disagree :101	Slightly disagree :158	
Neither agree nor disagree:169	Neither agree nor disagree:139	
Slightly agree : 87	Slightly agree : 78	
Strongly agree : 35	Strongly agree : 69	
Do not know : 90	Do not know : 49	

11a. How familiar are you with patch cuts?
I have never heard of the term "patch cut" :188
I have heard of the term "patch cut" but I do not know much about it :118
I am somewhat familiar with patch cuts :162
I am very familiar with patch cuts :148
I am extremely familiar with patch cuts : 96

11b. Which statement below best describes your thoughts, or personal experience, about making a patch cut on your woodland?
I have completed a patch cut: 209
I am in the process of making my first patch cut :5
I plan to make my first patch cut within the next year :10
I plan to make my first patch cut more than one year from now: 15
I have thought about making my first patch cut but have not yet made a decision: 39
I have thought about making a patch cut but decided not to make this type of cut: 40

I have not thought about whether I want to make a patch cut: 88 Question skipped due to skip pattern: 306

53

11c. How much do you agree or disagree with each of the following statements about making a patch cut on your woodland?

A patch cut...

Helps establish young trees on my woodland	Improves the habitat for some animals	Improves hunting on my land	Is good for the overall health of my woodland
Strongly disagree: 9	Strongly disagree: 5	Strongly disagree: 14	Strongly disagree : 11
Slightly disagree : 10	Slightly disagree: 2	Slightly disagree: 5	Slightly disagree : 17
Neither agree nor disagree: 55	Neither agree nor disagree: 30	Neither agree nor disagree:102	Neither agree nor disagree: 67
Slightly agree :106	Slightly agree : 95	Slightly agree :103	Slightly agree :117
Strongly agree :217	Strongly agree :267	Strongly agree :149	Strongly agree :174
Do not know: 9	Do not know: 7	Do not know : 33	Do not know : 20
Question skipped due to skip pattern: 306	Question skipped due to skip pattern: 306	Question skipped due to skip pattern: 306	Question skipped due to skip pattern: 306

Is not worth the effort/time	Looks ugly	Was recommended to me by a woodland expert	Will harm the types of wildlife I care about
Strongly disagree :149	Strongly disagree :103	Strongly disagree : 69	Strongly disagree :182
Slightly disagree :103	Slightly disagree : 64	Slightly disagree : 15	Slightly disagree : 88
Neither agree nor disagree:100	Neither agree nor disagree:107	Neither agree nor disagree: 95	Neither agree nor disagree: 72
Slightly agree : 18	Slightly agree : 81	Slightly agree : 45	Slightly agree : 11
Strongly agree : 13	Strongly agree : 38	Strongly agree :120	Strongly agree : 12
Do not know : 23	Do not know : 13	Do not know : 62	Do not know : 41
Question skipped due to skip pattern:306	Question skipped due to skip pattern:306	Question skipped due to skip pattern:306	Question skipped due to skip pattern:306

11c. (cont.):

Will cause me to lose income	Will encourage the growth of unwanted plants/trees
Strongly disagree :182	Strongly disagree : 88
Slightly disagree : 78	Slightly disagree: 71
Neither agree nor disagree: 78	Neither agree nor disagree: 78
Slightly agree : 16	Slightly agree : 92
Strongly agree : 14	Strongly agree : 29
Do not know : 38	Do not know : 48
Question skipped due to skip pattern: 306	Question skipped due to skip pattern: 306

12a) How familiar are you with conservation easements?		
I have never heard of the term "conservation easement" : 85		
I have heard of the term "conservation easement" but I do not know much about it:169		
I am somewhat familiar with conservation easements :199		
I am very familiar with conservation easements :131		
I am extremely familiar with conservation easements :128		

12b) Which statement below best describes your thoughts, or personal experience, about putting a conservation easement on all or part of your woodland?

I currently have a conservation easement on all or part of my woodland: 84

I plan to put a conservation easement on my woodland within the next year: 6

I plan to put a conservation easement on my woodland more than one year from now: 16 I have thought about putting a conservation easement on my woodland, but have not yet made a decision: 98

I have thought about putting a conservation easement on my woodland, but decided not to do so :127

I have not thought about whether I want to put a conservation easement on my woodland:127

Question skipped due to skip pattern :254

12c. How much do you agree or disagree with each of the following statements about putting a conservation easement on all or part of your woodland?

The process of getting an easement is not worth the effort/time	The process of getting an easement is too expensive	I cannot find a conservation organization/land trust willing to hold an easement on my woodland	I do not know how to put a conservation easement on my woodland
Strongly disagree: 89	Strongly disagree : 57	Strongly disagree :127	Strongly disagree :143
Slightly disagree : 52	Slightly disagree : 52	Slightly disagree : 42	Slightly disagree : 61
Neither agree nor disagree: 149	Neither agree nor disagree: 142	Neither agree nor disagree: 122	Neither agree nor disagree :103
Slightly agree : 39	Slightly agree : 45	Slightly agree : 10	Slightly agree : 59
Strongly agree : 26	Strongly agree : 13	Strongly agree: 8	Strongly agree : 21
Do not know :103	Do not know :149	Do not know :149	Do not know : 71
Question skipped due to skip pattern: 254	Question skipped due to skip pattern: 254	Question skipped due to skip pattern: 254	Question skipped due to skip pattern: 254

I do not trust conservation organization/land trust	A conservation easement would reduce the value of my property	I want to have the ability to develop my woodland	I want future generations to have the ability to develop my woodland
Strongly disagree :162	Strongly disagree : 50	Strongly disagree : 92	Strongly disagree : 99
Slightly disagree : 43	Slightly disagree : 32	Slightly disagree : 57	Slightly disagree : 42
Neither agree nor disagree: 104	Neither agree nor disagree: 92	Neither agree nor disagree: 100	Neither agree nor disagree: 106
Slightly agree : 63	Slightly agree :112	Slightly agree :107	Slightly agree : 98
Strongly agree : 50	Strongly agree : 95	Strongly agree : 83	Strongly agree : 92
Do not know : 36	Do not know : 77	Do not know : 19	Do not know : 21
Question skipped due to skip pattern: 254	Question skipped due to skip pattern 254	Question skipped due to skip pattern: 254	Question skipped due to skip pattern :254

12c. (cont.):

I want a conservation easement on my woodland to protect the overall health of my woodland	I want a conservation easement on my woodland as a legacy for future generations	I want a conservation easement on my woodland to help wildlife
Strongly disagree : 64	Strongly disagree : 62	Strongly disagree : 60
Slightly disagree : 41	Slightly disagree : 36	Slightly disagree: 33
Neither agree nor disagree: 126	Neither agree nor disagree: 120	Neither agree nor disagree: 133
Slightly agree : 78	Slightly agree : 88	Slightly agree : 82
Strongly agree :101	Strongly agree :107	Strongly disagree : 103
Do not know : 48	Do not know : 45	Do not know: 47
Question skipped due	Question skipped due	Question skipped due to skip pattern: 254
	easement on my woodland to protect the overall health of my woodland Strongly disagree: 64 Slightly disagree: 41 Neither agree nor disagree: 126 Slightly agree: 78 Strongly agree: 101 Do not know: 48	easement on my woodland to protect the overall health of my woodland Strongly disagree: 64 Slightly disagree: 41 Neither agree nor disagree: 126 Slightly agree: 78 Strongly agree: 101 Do not know: 48 Question skipped due I want a conservation easement on my woodland as a legacy for future generations Strongly disagree: 62 Slightly disagree: 36 Neither agree nor disagree: 120 Slightly agree: 120 Slightly agree: 120 Question skipped due

13a. How familiar are you with cost share programs for woodland owners?				
I have never heard of the term "cost share program" : 307				
I have heard of the term "cost share program" but I do not know much about it: 182				
I am somewhat familiar with cost share programs :124				
I am very familiar with cost share programs :63				
I am extremely familiar with cost share programs :36				

13b) Which statement best describes your thoughts, or personal experience, about participating in a cost share program for your woodland?
I have completed one or more cost share programs in the past: 105
I have applied for a cost share program in the past but have never completed a program : 9
I am currently participating in my first cost share program now : 0
I plan to participate in my first cost share program within the next year: 3
I plan to participate in my first cost share program more than one year from now : 1
I have thought about participating in a cost share program but have not yet made a decision: 26
I have thought about participating in a cost share program but decided not to do so: 30
I have not thought about whether I want to participate in a cost share program: 49
Question skipped due to skip pattern: 489

13c. How much do you agree or disagree with each of the following statements about participating in a cost share program to conduct a conservation activity on your woodland?

Are not of interest because I am already taking good care of my woodland	Are too complicated to enroll in when administered by the government	Are too complicated to enroll in when administered by nongovernmental groups	Do not cover enough of the costs to make the application worth the effort
Strongly disagree: 37	Strongly disagree: 31	Strongly disagree : 23	Strongly disagree: 19
Slightly disagree : 35	Slightly disagree : 30	Slightly disagree : 21	Slightly disagree: 33
Neither agree nor	Neither agree nor	Neither agree nor	Neither agree nor
disagree: 51	disagree: 59	disagree: 86	disagree: 64
Slightly agree : 57	Slightly agree : 49	Slightly agree : 32	Slightly agree : 47
Strongly agree : 40	Strongly agree : 34	Strongly agree : 14	Strongly agree : 28
Do not know: 3	Do not know : 20	Do not know : 47	Do not know : 32
Question skipped due	Question skipped due	Question skipped due to	Question skipped due
to skip pattern: 489	to skip pattern: 489	skip pattern: 489	to skip pattern: 489

Do not fund the improvements I am interested in doing	Ease the financial burden of making an improvement that I was already planning to make	Help me improve an aspect of my woodland that I could not afford otherwise	Help reassure me that I am taking good care of my woodland
Strongly disagree : 21	Strongly disagree : 10	Strongly disagree : 16	Strongly disagree : 16
Slightly disagree : 30	Slightly disagree: 10	Slightly disagree : 23	Slightly disagree: 14
Neither agree nor disagree: 73	Neither agree nor disagree: 81	Neither agree nor disagree: 59	Neither agree nor disagree: 81
Slightly agree : 37	Slightly agree : 63	Slightly agree : 68	Slightly agree : 65
Strongly agree : 19	Strongly agree : 32	Strongly agree : 26	Strongly agree : 28
Do not know : 43	Do not know : 27	Do not know : 31	Do not know : 19
Question skipped due to	Question skipped due	Question skipped due	Question skipped due
skip pattern:489	to skip pattern:489	to skip pattern:489	to skip pattern:489

Provide me with valuable information	Were recommended to me by a woodland expert	I do not know enough about cost share programs to apply
Strongly disagree: 9	Strongly disagree : 27	Strongly disagree : 45
Slightly disagree: 9	Slightly disagree : 18	Slightly disagree : 53
Neither agree nor	Neither agree nor	Neither agree nor
disagree: 83	disagree: 75	disagree: 69
Slightly agree : 59	Slightly agree : 33	Slightly agree : 27
Strongly agree : 41	Strongly agree : 46	Strongly agree : 11
Do not know : 22	Do not know : 24	Do not know : 18
Question skipped due	Question skipped due to	Question skipped due
to skip pattern: 489	skip pattern:489	to skip pattern:489

13d. Are you currently participating, or have you already participated, in any of the following cost share programs?

EQIP (Environmental Quality Incentives Program)		CSP (Conse Stewar Prograi	dship	WHIP Habita Incent Progra	ives	Wildlif Warble	(Woods, e and ers Cost Program)	for a c progra	nber the
Yes	: 72	Yes	: 15	Yes	: 47	Yes	: 3	Yes	: 16
No	:138	No	:188	No	:165	No	:212	No	:198
Do not	Do not know: 13		know: 20	Do not	know:11	Do not	know:8	Do not	know: 9
Question skipped		Questic	n	Question skipped		Questi	on skipped	Questi	on skipped
due to	skip	skipped	l due to	due to skip		due to skip		due to	skip
pattern	:489	skip pa	ttern:489	patter	n:489	pattern:489		patter	n:489

14. Which of the following topics regarding the care or protection of your woodland, if any, are you interested in learning more about?

Control of unwanted insects or tree disease	Wildlife or wildlife habitat	Timber production	Conservation easements	Invasive plants
Yes:546	Yes:507	Yes:328	Yes:248	Yes:502
No :166	No :205	No :384	No :464	No :210

Vermont's Current Use Program	Arranging for an expert to visit my land	Cost share programs	Patch cuts
Yes:218	Yes:186	Yes:333	Yes:251
No :494	No :526	No :379	No :461

15. How trustworthy, or untrustworthy, are the following sources of information about the care or protection of your woodland?

A consulting forester	A county forester	A family member or friend	
Not at all trustworthy: 8	Not at all trustworthy: 10	Not at all trustworthy: 30	
A little trustworthy: 19	A little trustworthy: 15	A little trustworthy: 82	
Somewhat trustworthy:111	Somewhat trustworthy: 89	Somewhat trustworthy :220	
Very trustworthy :283	Very trustworthy :282	Very trustworthy :136	
Extremely trustworthy :184	Extremely trustworthy :210	Extremely trustworthy: 69	
Do not know :107	Do not know :106	Do not know :175	

A wildlife biologist	Another woodland owner	Myself (my personal experience)	
Not at all trustworthy: 14	Not at all trustworthy: 21	Not at all trustworthy: 35	
A little trustworthy: 21	A little trustworthy: 92	A little trustworthy: 62	
Somewhat trustworthy :107	Somewhat trustworthy :270	Somewhat trustworthy :155	
Very trustworthy :248	Very trustworthy :125	Very trustworthy :222	
Extremely trustworthy :157	Extremely trustworthy: 30	Extremely trustworthy :154	
Do not know :165	Do not know :174	Do not know : 84	

Audubon Vermont	Vermont Coverts	Vermont Woodlands Association	
Not at all trustworthy: 26	Not at all trustworthy: 17	Not at all trustworthy: 13	
A little trustworthy: 27	A little trustworthy: 23	A little trustworthy: 17	
Somewhat trustworthy :102	Somewhat trustworthy: 59	Somewhat trustworthy: 81	
Very trustworthy :141	Very trustworthy : 67	Very trustworthy :143	
Extremely trustworthy: 71	Extremely trustworthy : 38	Extremely trustworthy: 67	
Do not know :345	Do not know :508	Do not know :391	

Woods, Wildlife and Warblers	University of Vermont Extension Services	Vermont Department of Forests, Parks and Recreation	
Not at all trustworthy: 18	Not at all trustworthy: 16	Not at all trustworthy: 20	
A little trustworthy: 19	A little trustworthy: 15	A little trustworthy: 24	
Somewhat trustworthy: 66	Somewhat trustworthy: 85	Somewhat trustworthy :103	
Very trustworthy : 75	Very trustworthy :239	Very trustworthy :186	
Extremely trustworthy: 37	Extremely trustworthy :130	Extremely trustworthy :100	
Do not know :497	Do not know :227	Do not know :279	

Vermont Fish and Wildlife Department	USDA Natural Resources Conservation Service (NRCS)
Not at all trustworthy: 25	Not at all trustworthy: 18
A little trustworthy: 31	A little trustworthy: 30
Somewhat trustworthy :106	Somewhat trustworthy :107
Very trustworthy :227	Very trustworthy :175
Extremely trustworthy :123	Extremely trustworthy: 99
Do not know :200	Do not know :283

16. How would you prefer to receive information/advice, if at all, about the care or protection of your woodland in the future?

Talk to someone	Arrange for an expert to visit my land	Receive a brochure, magazine, or other written material	Attend a conference, workshop, or class inperson	Search on the internet	Receive an email/e-newsletter	Attend an online workshop/class
Yes:387	Yes:316	Yes:503	Yes:281	Yes:315	Yes:367	Yes:208
No :325	No :396	No :209	No :431	No :397	No :345	No :504

17. Do you know if there is an agency, organization, or program in your area that will send a woodland expert to visit your land in Vermont free of charge?

Yes:229

No/Do not know: 483

18. Have you ever spoken to an expert about improving wildlife habitat on your woodland in Vermont?

Yes: 318

No: 371

Do not know: 23

19. What is your gender?

Male: 532 Female: 178

Other (Neutral): 2

20. What is your age?

Min. :25.00

1st Qu.:59.00

Median :67.00

Mean :65.33

3rd Qu.:73.00

Max. :93.00

21. What is the highest degree or level of school you have completed?

Less than 12th grade: 9
High school/GED :145
Some college : 79
Associate degree :71
Bachelor's degree :172
Advanced degree :236

22. Are you a member of any conservation or natural resource management organizations?

Yes: 202 No: 510